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Descriptors-*ABSTRACTS, CURRICULUM, EDUCATIONAL ADMINISTRATION, EDUCATIONAL PSYCHOLOGY, EDUCATIONAL SOCIOLOGY, GUIDANCE, INDUSTRIAL ARTS, *MASTERS THESES, STATISTICAL ANALYSIS, TEACHING, TECHNICAL EDUCATION, *VOCATIONAL EDUCATION

Abstracts of 130 studies during the 1965-66 school year are arranged alphabetically by author within nine categories. Many of these are in the area of vocational education. Abstracts in administration treat coordination, cumulative records, inservice, program development, reorganization plans, student services handbook, and student teacher handbook. Abstracts in curriculum treat course revisions, curriculum guides, management concepts in teaching, materials selection, occupational surveys, problem-solving, program development, programed instruction, proposed programs, and resource units. Abstracts in evaluation treat counselor training and program evaluation. Abstracts in guidance include career choice, college success, counselor roles, followup, guidance information sources, guidance services, head start, motivation, parental attitudes, test prediction, trait analysis, and work-study. Abstracts in instruction include audiovisual materials, closed circuit television, program coordination, equipment purchase, driver and safety education films, equipment and facility needs, instructional guides and techniques, numerical control degree programs, and course offerings. In addition there are abstracts in the fields of psychology, sociology and statistics, and technical abstracts. Each abstract presents the purpose of the study, the methods used, and the findings. Subject matter and author indexes are included. (JK)

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ABSTRACTS – GRADUATE RESEARCH

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COMPILED BY

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PREFACE

Following the trend set in previous Abstracts editions (Graduate Studies In Education Series nos. 3, 4, and 5) at Stout State University and at the request of various individuals and agencies within the state, the present volume includes resumes of studies completed during the 1965-66 school year. The immediate report updates the previous ones in reviewing more recent studies. The general format remains very much the same with attempts being made to classify studies according to the same categorical standard as those which dominated the first series.

Such abstracts as these are not intended to be completed for details regarding the individual studies but should be looked at from the prospectus of locating topics of particular interest. For detailed reporting, the reader is referred to the original investigation reports which may be obtained from the Research Reference Library in Harvey Hall of Stout State University.

Much effort has been expended in compiling these abstracts with Mrs. Linda Jacobs, Miss Judy Kuehl, Mrs. Drusilla Duquaine here being duly credited and acknowledged for their initiative in typing the terminal manuscript. Likewise, the local Directors of the Wisconsin Schools of Vocational, Technical, and Adult Education should be acknowledged for their interest and encouragement in compiling the materials.

E.W.C.
Menomonie, 1967

INTRODUCTION

"Research is . . . a prominent key essential to the opening of new doors in education."*

The general organization for the present report was to arbitrarily categorize each graduate study completed during the 1965-66 school year at Stout State University under one of the following eleven categories:

1. Administration
2. Curriculum
3. Evaluation
4. Guidance
5. Instruction
6. Philosophy
7. Psychology
8. Sociology
9. Statistics
10. Supervision
11. Technical

For the present compilation, no studies were considered to fall under listed categories of Philosophy and Supervision; hence, the present listings include only nine classifications which are broken down as shown below:

Categories	Numbers	Percentage
1. Administration	9	6.9
2. Curriculum	38	29.2
3. Evaluation	3	2.3
4. Guidance	24	18.5
5. Instruction	32	24.6
6. Psychology	9	6.9

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*E. Wayne Courtney, Applied Research In Education. (Totowa, New Jersey: Littlefield, Adams, and Company, 1965), p. 1.

Categories	Numbers	Percentage
7. Sociology	2	1.6
8. Statistics	3	2.3
9. Technical	10	7.7
Totals	130	100.0

As shown above, some categories contained few abstracts, others contained many. The Curriculum, Instruction, Guidance, and Technical categories appear to be the most popular with Stout graduate students.

Administration

"The educational program in any community reflects the society of which the school is a part."*

Abstracts included for this section include information representing the following subject matter:

1. Coordination.
2. Cumulative Records.
3. In-Service Education for Teachers.
4. Program Development.
5. Reorganization Plans.
6. Student Services Handbook.
7. Student Teacher Handbook.
8. In-Service Education for Teachers.

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*Cf. Courtney, loc. cit., p. 261.

Campbell, William H., A Student Services Handbook for Wisconsin Schools of Vocational, Technical, and Adult Education. Plan B, M.S., 1966, Stout State University, 34 pages: Adviser, Guy Salyer.

Purpose of Study--The purpose of the study was to develop a student services handbook for use in Wisconsin Schools of Vocational, Technical, and Adult Education.

Method Used--Descriptive research was used in solving the problem by finding out what the present conditions were and then deciding what was needed. Available information was then collected to meet the needs. The study took into consideration the opinions of recognized experts in the field.

Summary and Findings--The Handbook was developed to serve as a guideline in general for the Student Services Department of Vocational, Technical, and Adult Schools inasmuch as there is no single plan that will assure an effective program in every school. These general guidelines are flexible and will be of value to all.

In the three chapters, "Admissions," "Student Personnel Services," and "Anxillary Services," guidelines were established; and where possible state forms and sample forms are shown. The emphasis, of course, being placed on the heart of the Student Services Program: guidance and counseling. The Handbook will be published by the State Department of Vocational, Technical and Adult Education and will be used throughout Wisconsin; and tentatively, copies will be mailed to the other 49 states. Approximately one-half of the states were contacted, and no Student Services Handbook was available by anyone for Vocational, Technical, and Adult Programs.

Gabregiorgis, Asefa, A., Development of Practical Arts, Vocational, and Technical Teacher Training Program for Ethiopia. Plan B, M.S., 1966, Stout State University, 65 pages: Adviser, G. S. Wall.

Purpose of Study--The purpose of the study was to help set up a curriculum in Ethiopia in which practical arts, vocational, and technical education subject-matter teachers will be trained to man the expanding secondary level education.

Method Used--The method used in this study was a review of literature.

1. Ethiopian literature dealing with the past educational development and the extent of the present expansion of secondary level education was considered in terms of teacher needs and the students benefitting from the expansion program in practical arts, vocational, and technical education aspect of the overall educational curricula.
2. American literature dealing with education, particularly teacher education was reviewed in general and the regional and

Gabregiorgis (continued)

national accrediting agencies as they affect the teacher training programs in the United States. This review was intended to aid the development of teacher education in Ethiopia in the areas stipulated above.

Summary and Findings--This study was made due to the fact that no teacher training institution exists as yet in Ethiopia in which practical arts, vocational, and technical subject-matter teachers could be trained.

It was found that Ethiopia needs a minimum of 1175 teachers in those areas mentioned over the next four years. The trend, however, showed that the demand for teachers in these areas was well above the figure stipulated if all the plans go into effect.

Once this demand was established, general guidelines were given to develop a system in which the said subject-matter teachers could be trained. In the development of the teacher training curriculum, a Dual Purpose Plan was proposed in which teachers and technicians could be trained in the same set up; because it was felt that any developing nation is short of both types of people which it has to meet in one way or another. To demonstrate how the Dual Purpose may be applied, an industrial arts teacher education program was chosen. The curriculum, credit division and schedules of this program was given. In conclusion, the study is to be presented to the Ministry of Education and the Haile Selassie I University to be evaluated by the people in the field. On the other hand, it was suggested, among other things, that further study by made before a detailed course of study is prepared.

Gullickson, N. Anthony, A Proposed Handbook for Off-campus Student-Teachers in Industrial Education at Stout State University. Plan B, M.S., 1966, Stout State University: Adviser, E. Robert Rudiger.

Purpose of Study--The purpose of this study was to develop a handbook that would serve as a guide for initiating the student teacher classroom experiences, delegate the responsibilities of the student teaching program, orient the student teacher to the local school, delegate assignment of responsibility to the student teacher, and evaluate the student teachers overall performance.

Method Used--The method used consisted of a critical analysis and interpretation of what is known and has been done concerning this problem. In so doing, the writer contacted other universities and colleges throughout the United States and obtained the handbooks that they were using in their teacher education programs. A proposed off-campus student teacher handbook was then developed; geared to the needs of the Department of Industrial Teacher Education at Stout State University, Menomonie, Wisconsin.

Summary and Findings--Student teaching is an experience in which the effectiveness gained by the student teacher is based upon the activities or learning situations that are experienced by him. From this statement it is seen that student teaching is more than just conducting class for a period of eight or nine weeks. To more adequately provide these experiences for those in teacher training at Stout State University, the writer has developed a proposed handbook for student teaching. Throughout this handbook the important objectives of teacher education are clearly defined. These developments are revealed through the duties and experiences connected with the students, the school, and the community as a whole.

The values of student teaching should be wide in scope. Among the most important values are those providing chance to apply theory into reality. For these reasons a handbook has been developed that as completely as is possible includes all the routine and daily experiences that will be met in most situations.

Kahl, Richard R., A Proposed Plan for Organization and Administration of Guidance in the Rice Lake Junior High School. Plan B, M.S., 1966, Stout State University: Adviser, Guy Salyer.

Purpose of Study--The generally accepted breadth of guidance services now include social, emotional, educational, and vocational adjustment for each child. It is necessary that we provide more effective guidance for the adolescent. The purpose of this study was to define and implement guidance services in the Rice Lake Junior High School. It was proposed that this program was designed to offer leadership, consultation, evaluation, devices, techniques, and coordination of services in the school.

Method Used--An extensive search for material from books, periodicals, magazines and any related literature and also literature that was being used elsewhere. The method utilized in the development of this paper was the normative survey approach.

Summary and Findings--An attempt was made in this paper to ascertain what a good junior high school guidance program is. It was necessary to take into account the health, social, and economic needs of youth in addition to their educational needs in order to identify the educationally disadvantaged students in the Rice Lake Junior High School and to provide educational programs to meet the special needs of these students. Also, the study attempted to incorporate special services into the guidance program, such as, a school nurse, social worker, psychologist, and psychiatrist.

Karasar, Niyazi, A Proposed Administrative Organizational Plan for the Academic Calendar for Higher Education in Turkey. Plan B, M.S., 1966, Stout State University, 213 pages: Adviser, E. Wayne Courtney.

Purpose of Study--The purposes of the study were twofold: (1) To present various types of academic calendars and to develop one which would provide adequate educational opportunities for the increasing enrollments of higher education. The plan provides for students acceleration, full utilization of facilities, and an improved use of staff; (2) To develop modifications in the grade organizational system and the elective course offerings, so that varying abilities might be considered and time might be utilized more efficiently.

Method Used--The problem involved five major steps: (1) Review of the literature to include the educational pattern in Turkey and the educational pattern in the United States. (2) Collection of information related to various types of academic calendars on the semester plan, the semester-summer session plan, the quarter plan, and the year-round plan on either a three-trimester or a four quarter basis; early preparation of the students; and systems for course offerings. (3) Sequentialization of the collected materials into workable form, having a panel of experts evaluate the contents. (4) Development of conclusions and implications based upon the results of the study. (5) Development of guide for the use of collected materials.

Summary and Findings--The present academic calendars in the United States have long histories, and there have been many changes. There is no one unique calendar system. At present, changes are taking place at a very rapid pace so that it can be called a period of transition for academic calendars. Almost every institution has a different type of academic calendar, and none of them has been accepted as the best for all.

The chief trend is toward more intensified, better balanced, and unified year-round programs, and more colleges and universities are moving toward these goals. Both three-trimester and four-quarter plans have been accepted as ideal plans by most of the educators.

The three-trimester plan has been proposed and the organizational procedure has been given in the study for the purpose of making detailed programs of any one type of year-round calendar plans. Although the three-trimester plan has been proposed, it has been recommended that both three-trimester and four-quarter plans should be considered and further study should be made to decide which one fits best for the local conditions in Turkey. It was also recommended that a calendar change from the traditional to a year-round plan should be made in the shortest possible time in Turkey.

Besides the academic calendar plans, grading and course offering systems have been included in this study because of their close relationships to each other, and changes have been recommended in grading and course offering systems in Turkey.

Kees, John J., A Study of the Seventh Grade Cumulative Records, John Muir Junior High School, Wausau, Wisconsin. Plan B, M.S., 1966, Stout State University, 40 pages: Adviser, Guy Salyer.

Purpose of Study--The overall purpose of this study was an attempt to ascertain which sources and kinds of information are helpful and desirable in the cumulative records at the junior high school level, which information contained in the John Muir Junior High School seventh grade cumulative records was not currently being used and should be removed, and to find out which kinds of additional information the teachers would like included in the cumulative records of future incoming seventh grade students.

Keuj (continued)

Method Used--A survey of the literature on cumulative records was employed in this study. Data were obtained through a check list of the materials currently contained in the seventh grade cumulative records, and through a questionnaire to the faculty of John Muir Junior High School concerning the helpfulness of the information currently contained in these records.

Summary and Findings-- (1) Much of the information currently contained in the seventh grade cumulative records is not being used by the faculty. (2) The records contain some information which probably should have been removed before they came to the junior high school. (3) There is an apparent lack of uniformity as to the different types of information used in the various elementary schools within the Wausau school system. (4) The information which is filed loosely in the records would probably be of greater value if it were summarized and put on a form provided for that purpose.

Khoshzamir, Firouz, *A Supervisory Plan for Industrial Education Training Program in Iran*. Plan B, M.S., Stout State University, 1966, 102 pages: Adviser, E. Wayne Courtney.

Purpose of Study--The purpose of this study was to establish procedures and criteria for supervision of industrial education training programs in Iran.

Method Used--This study utilized the normative type survey of research. Literature was reviewed for gathering necessary data.

Summary and Findings--The findings in this study will be used by the administrators, supervisors, and teachers of vocational and technical education schools in Iran.

McKillip, Robert H., *Coordination of Pupil Personnel Services in the Catholic School System of Wisconsin Rapids*. Plan B, M.S., 1966, Stout State University, 60 pages: Adviser, Guy Salyer.

Purpose of Study--Integration of elementary and secondary education in the Catholic schools will, through a sound guidance program, provide greater opportunity for individual development. Therefore, it was the purpose of this study (1) to obtain an overview of the existing pupil personnel services in the Catholic schools in the city of Wisconsin Rapids; (2) to investigate current procedures in the development of a K through 12 guidance program; and (3) to propose the organization and administration of a coordinated developmental guidance program among the six area Catholic elementary schools and the Catholic high school in Wisconsin Rapids.

Method Used--The method used to develop this proposal was to obtain an overview of the current services being offered to the local Catholic high school population, evaluate the high school guidance program by

McKillip (continued)

use of the Manual for Evaluative Criteria (Section G), investigate current procedures and philosophy of K through 12 guidance programs in the professional literature, and then utilize experience in the local system plus professional training to propose a coordinated local guidance program for the area Catholic schools.

Summary and Findings--The study indicated that the structure proposed for the organization and administration of guidance services for the Catholic schools in Wisconsin Rapids is sound and feasible. It is anticipated that the adoption of the proposal would bring opportunity for greater individual development especially to the grade school population as there is an evident lack of guidance services in this area. A strong recommendation accompanying the proposal of an extension of guidance services is the reorganization of the administrative structure of the area Catholic schools.

Waalkens, Peter T., In-Service Education for Industrial Arts Teachers. Plan B, M.S., 1966, Stout State University, 57 pages: Adviser, N. W. Prichard.

Purpose of Study--The study was conducted to establish a proposed in-service program to be utilized as a guide in establishing policies for recognizing in-service education.

Method Used--The review of literature was collected, organized, and interpreted. Each area was analyzed and then on the basis of the findings a program was suggested for in-service education of teachers.

Summary and Findings--The teacher is never really finished with his education; as long as there is change in the world the teacher will have to re-educate.

Among the various ways of change are experiences such as: orientation week, workshops, professional meetings, formal education, visitation and observation, travel, industrial experiences, professional writings and action research.

II

Curriculum

"The curriculum acts as a facilitation system for meeting the needs of society as well as for the individual needs of pupils."*

The information contained within this section of the report represents a variety of studies which were oriented specifically to the classroom and its teacher. The section includes reports about:

1. Course Revisions.
2. Curriculum Guides.
3. Management Concepts in Teaching.
4. Materials Selection.
5. Occupational Surveys.
6. Problem-Solving Approaches.
7. Program Development.
8. Programmed Instruction.
9. Proposed Programs.
10. Resource Units.

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*Cf. Courtney, loc. cit., p. 303.

Alkan, Cevat, *The Proposed Curriculum for Training Woodworking Teachers for the Trade and Industrial Education in Turkey*. Plan B, M.S., 1966, Stout State University, 168 pages: Adviser, George A. Soderberg.

Purpose of Study--The purpose of the study was to evaluate the woodworking program which is being offered in the Ankara Men's Technical Teacher Training College in Turkey, to develop existing programs according to present needs of the country, and to establish an effective program that can be able to keep up with new industrial and technological developments.

Method Used--The normative survey type of research, by use of the documentary frequency method was used in the study. Publications, instructional units, and other literature related with curriculum development and course of study were reviewed. Correspondence was made with some book companies and some outstanding universities in the United States.

Summary and Findings--The content of the study includes brief information about Turkey and vocational education in Turkey, a background of Ankara Men's Technical Teacher Training College, a review of the literature related to curriculum, procedure, vocational education and vocational teacher training programs, and the proposed curriculum. The study implied that a balance between academic education, professional education and technical education should be set up, certain scholastic standards should be applied, more than one type of teacher training program should be employed, academic programs should be concentrated into first two years, and transition between higher educational institutions should be available.

Allwardt, Lawrence E., *A Resource Unit - Methods and Materials For Production of Etched Circuit Boards in The School Shop*. Plan B, M.S., 1966, Stout State University, 75 pages: Adviser, Philip W. Ruehl.

Purpose of Study--The purpose of the study was to gather information on methods of production and materials which could be used to plan a unit of instruction on etched circuit boards in a school shop.

Method Used--Primary information was gathered directly from manufacturers of the various materials. Additional information was gathered by experimentation and observation of industrial methods.

Summary and Findings--Adequate information and satisfactory materials are now available which will make instruction in this area practical. Instruction in printed circuit techniques can be a valuable experience for students.

Benitz, Lewie R., A Compilation of Selected Units for the Instruction of Tungsten-Inert Gas Welding of Aluminum to Advanced Senior High School Welding Students. Plan B, M.S., 1966, Stout State University, 57 pages: Adviser, Dick G. Klatt.

Purpose of Study--The purpose of this study was to organize and present instructional units and technical knowledge that will aid the instructor in presenting the tungsten-inert gas welding process.

Method Used--The methods used in gathering material for this study have been (1) documentary research, which included the review of literature and the compilation of the literature; and (2) shop experimentation where the developed units were tried out in a laboratory situation.

Summary and Findings--The expanding utilization of aluminum in industry has created a demand for welders trained in aluminum fabrication. The tungsten-inert gas welding process has proven to be one of the best methods of joining this metal.

This paper was prepared to provide the basic facts which must be understood about TIG welding of aluminum. The instructor need not present all this information to the student, but it is hoped that at one time or another all this information is found beneficial.

Burtness, Clifford L., Proposed Post-High School Automotive Course Content For The Willmar Area Vocational Technical School. Plan B, M.S., 1966, Stout State University, 20 pages: Adviser, E. Robert Rudiger.

Purpose of Study--The purpose of this study was to find answers to the following questions:

1. Was the right training emphasis placed on the various areas of automobile repairs?
2. Were they trained to the level of competency essential to make them employable?
3. Were related subjects sufficiently covered, management etc.?

Method Used--A questionnaire was sent to twenty-three franchised dealerships. A personal interview was also conducted with each of the population sampled. The local advisory group was used for pretesting the questionnaire.

Summary and Findings--The results indicated that there was a need for (1) a high degree of technical knowledge in most of the repair areas, with special emphasis being needed in the electrical and the brake area; (2) varying degrees of manipulative ability in all the repair areas, with special emphasis needed in the electrial and brake area; (3) related training in communications, safety practices and the use of service manuals; (4) little training in service and parts management, sales and factory relations.

Clough, Kendrick W., The Development of a Teaching Unit in the Heat Treatment of Water Hardening Carbon Steels at the Twelfth Grade Secondary Level of Education. Plan B, M.S., 1966, Stout State University: Adviser, Harold H. Halfin.

Purpose of Study--The purpose of the study was to further the knowledge of the heat treatment of steels as well as to help the teacher in this area determine the objectives, content, teacher oriented, student oriented, student oriented activities and evaluation for a teaching unit in the heat treatment of water hardening carbon steels.

Method Used--The method of determination used in this paper was visitation to Menomonie, Wisconsin, area high schools. A review of literature was also made. This review included a review of published and unpublished courses of study.

Summary and Findings--It was found that there was a demand for heat treaters, The cost of setting up a program is not great, only around twelve hundred dollars. It was also found that a unit can be taught at the twelfth grade level.

Darling, Kenneth J., Programmed Instruction: Applied to Industrial Education. Plan B, M.S., 1966, Stout State University, 61 pages: Adviser, Lee H. Smalley.

Purpose of Study--The purpose of this study is to investigate programmed instruction, to discover its advantages, to find out how a program is constructed, and to become familiar with the procedure of evaluating materials taught using the programmed instruction method of teaching. Finally it has the ultimate goal of enabling the author to construct a sample program which may be tested, revised, and eventually be used in a classroom situation.

Method Used--A review of current literature served as the method of obtaining data for the study. The data gathered has been used as a guide to the suggestions formulating the body of this paper.

Summary and Findings--Programmed instruction was found to be an effective and efficient method of teaching when the efficiency refers to student time involved. Used correctly, in the field of education, programmed instruction must be recognized as another teaching method. Programmed instruction may be used to complement other methods of study; to enrich the course of study; to act as a remedial tool; and for the review of material. The construction of a program is a rather difficult and time consuming task. The programmer must have special training in the art of programming, although a classroom teacher can do it.

Darzano, Frank D., Solid State Electronics: Resource Materials for Industrial Arts Education. Plan B, M.S., 1966, Stout State University, 37 pages: Adviser, Philip W. Ruehl.

Darzano (continued)

Purpose of Study--The purpose of this study was to provide industrial arts teachers, at the beginning level, in the area of electricity or electronics, with resource materials on the subject of solid state electronics. These materials also provide the teacher with the opportunity to improve and update units of instruction on solid state electronics already incorporated in their courses of study.

Method Used--The normative survey type of research was used in this study. A review of literature in the fields of curriculum development, selection and classification of materials, and use of instructional materials was made in order to provide a basis for the development of the study.

A review of current books, periodicals, and films dealing with the subject of solid state electronics was made. Letters were sent to electronics companies in order to obtain industrial literature pertinent to the topic.

These various resource materials were then analyzed, selected, and classified in accordance with the criteria and methods derived in this study.

Summary and Findings--

1. There exists a wealth of resource materials dealing with the subject of solid state electronics. These materials usually appear in the form of pamphlets, manuals, booklets, books, periodicals, films, and filmstrips.
2. The most up-to-date materials come from industrial literature. This material can usually be obtained free, or in some cases at very low cost.
3. The most successful use of resource materials can be made when they are used in conjunction with resource units.
4. An electricity or electronics course, at the beginning level, constructed with a unit of instruction in solid state electronics, would provide an opportunity for the instructor to break away from the traditional pattern of teaching these subjects, and it would impart a new and challenging experience to their students.
5. The resource materials presented in this study provide a base from which an industrial arts teacher may obtain ideas, concepts, and information for constructing teaching materials in solid state electronics.

Edelbach, Ralph D., The Development of a Programmed Instructional Unit of the Basic Printing Processes. Plan B, M.S., 1966, Stout State University, 81 pages: Adviser, William Daehling.

Purpose of Study--The central problem of this study was to develop a programmed instructional unit presenting the basic printing processes. The program was designed to be used in a third-level American industry class studying a communications unit.

Method Used--A review of the literature pertaining to programmed instruction and graphic arts was undertaken to provide the background necessary to construct the program. Based on the evidence presented in various books, the physical method of presenting the program was decided upon. The actual material contained within the program was selected from the graphic arts references and its content was reviewed and approved by selected members of the Printing Department, Stout State University.

Summary and Findings--The recent interest in programmed learning indicates that this method of instruction has merit. Some studies have demonstrated that this type of instruction can be used in group situations and produce good results. Through the use of two slide projectors, this program has been designed to be given to an entire class. One projector will show the verbal material and the other will display photographs and diagrams to explain certain frames.

Ehrenreich, Harold, A Review of the Problem-Solving Approach as Used in Industrial Arts. Plan B, M.S., 1966, Stout State University, 26 pages: Adviser, Armand G. Hofer.

Purpose of Study--The purpose of this study was to review the available literature, and study the effectiveness of the problem-solving approach to teach the industrial arts subjects.

Method Used--The method of research was a review of the literature, experimental studies, and writing.

Summary and Findings--The research and experiment approach has been successfully used on a limited scale in junior and senior high industrial arts courses. Any student can achieve success with this method if the problems are commensurate with his abilities. The method has many theoretical advantages, but there is little experimental evidence to uphold or reflect the theories. Experimental studies indicate that the method may have the advantage of providing more effective learning. While the method is not an educational panacea, it appears to be an important method of instruction that each teacher should use in his teaching methods.

Frakes, Norman L., Welding Metallurgy and Its Implications for Teaching at the Vocational, Technical, and Adult School Level. Plan B, M.S., 1966, Stout State University, 39 pages: Adviser, Harold Halfin.

Purpose of Study--The primary purpose of the study was to compile, analyze, and organize materials suitable for the teaching of welding metallurgy at the Vocational, Technical, and Adult School level. The author intended the study to be of benefit to vocational teachers of welding in setting up and implementing a unit dealing with welding metallurgy.

Method Used--In the formulation of the study, the author gathered data from a variety of sources dealing with metallurgy, analyzed the material in light of its applicability to vocational welding courses, Frakes (continued)

and then organized the material in a manner so as to be of value to a vocational welding instructor.

Summary and Findings--The subject of welding metallurgy, even in a limited sense, is very complex. It is necessary to deal with the subject in a practical manner so as to be of practical value to the vocational student of welding.

Fulcer, Peter A., A Conceptual Approach to Management. Plan B, M.S., 1966, Stout State University, 122 pages: Adviser, Wesley Face.

Purpose of Study--The purpose of this study was to become familiar with the coneptual approach to teaching, to develop an understanding of the concept of management, and to develop a resource unit in management to be used in supplementing and updating the present course of study offerings in the Manufacturing classes at James Monroe High School in Fredericksburg, Virginia.

Method Used--The method used was as follows: review of the literature to develop the background and importance of the problem; review of the literature to develop the management concept; and, development of the resource unit using the conceptual analysis approach to learning. This was done by identifying the main concepts involved in management; identifying the sub-concepts; making a line and block diagram of the concepts; defining the concepts; and then developing teaching objectives, teaching content, teaching activities, teaching expedients, and evaluation items for each concept.

Summary and Findings--The findings indicated that the industrial arts curriculum as it now stands does not meet its objectives. It was found that there was a general agreement among authorities that the primary objective of industrial arts is the study of industry. On the basis of this study, it was concluded that one of the best ways of studying industry is through the conceptual analysis approach to learning.

Gygax, Howard W., The Development and Trial of Directed Problem-Solving Experiment in Electricity at Stout State University. Plan B, M.S., 1966, Stout State University, 40 pages: Adviser, P. W. Ruehl.

Purpose of Study--It was the purpose of this study to apply the principles of directed problem-solving to the development of four laboratory experiments in the basic electricity course at Stout State University.

Method Used--The revised laboratory experiments were used by the second and third quarter electricity classes. After consultation with and constructive criticism from the advisor, the researcher revised the experiments and administered them to a class of electricity students. Then the students were observed and the findings were recorded into the study.

Gygax (continued)

Summary and Findings--After the administration and evaluation of the experiments, the following conclusions were drawn:

1. The techniques of writing directed-discovery experiments were most beneficial as a learning device for teachers in education.

2. Directive-discovery experiments require that the teacher be readily available for student help. The teacher must be available to answer questions in class.

3. Even though directed-discovery experiments require more initiative and self-direction from the student, the directions for the experiment must be clearly stated and easily understood.

4. Directive experiments are beneficial for all students, regardless of their intellectual ability. The experiments challenge the superior student to make more elaborate designs. The slower student requires more help from the instructor; however, he is able to draw meaningful conclusions from the experiments.

Haas, James D., Proposed Revision of Industrial Arts Curriculum in the Barron Area School District. Plan B, M.S., 1966, Stout State University, 34 pages: Adviser, William W. Mamel.

Purpose of Study--The purpose of the study was to determine what courses in the area of industrial arts or industrial education should be provided at the Barron Area High School for those who plan to continue in the field of industrial of vocational education, or will terminate their education upon graduation. To analyze the present program and make any necessary recommendations to upgrade the offerings.

Method Used--A review of the literature was made in order to determine the areas with the greatest opportunity at present, and into the future. The review also included the development of the philosophy, objectives, and course offerings in industrial education for grades seven through twelve in the Barron Area School District.

Summary and Findings--The findings included the following: (1) That the students of the Barron Area School District are being handicapped by lack of offerings, space, equipment, and staff. (2) That a three track program including six areas of instruction be offered with an addition to the instructional staff, and an increase in the space and facilities. These areas of instruction to be drafting, woodworking, metalworking, graphic arts, electricity-electronics, and power mechanics.

Hemsey, William L., An Analysis of the Trade Extension Evening Program at the Duluth Area Vocational Technical Institute. Plan B, M.S., 1966, Stout State University, 30 pages: Adviser, E. Robert Rudiger.

Purpose of Study--The purpose of this study was to provide data to facilitate an understanding of the current industrial training needs as they pertain to the expansion of current course offerings, and to

Hemsey (continued)

evaluate the effectiveness of current skill-improvement training programs being used by local and surrounding industries. This information will enable the administrative staff of the Duluth Vocational Education System to have a better insight into course offerings and physical plant needs for the trade extension program at the technical institute which is now being built.

Method Used--The normative survey method was used in securing data for this study. The survey included nearly all industries in the Duluth area that employed fifty or more persons. The industries were selected on the basis that they employed at least one person for a minimum of twenty weeks during the year. The industries selected were in four categories: commercial and utilities, manufacturing, construction and transportation.

Summary and Findings--In view of the findings of this study, it seemed to be evident that:

1. A greater effort should be made in the distribution of printed schedules and in directing them to the proper individuals.
2. Increased participation in trade extension classes shows that industry expects employees to participate in occupational growth.
3. Since only half of the industries knew that any industry can start skill improvement classes, it might be wise to stress more personal contact regarding training.
4. Industries are generally aware of the need for up-grading programs.
5. Developing the basic understanding of blueprint reading would be advantageous to the employer as well as the employee.
6. Closer working relationships should be maintained regarding the objective and development of a given training program.
7. Extension training should keep abreast with technological changes.

Hotchkiss, David R., Development of a Course of Study in Industrial Mathematics for Use at Maine East High School, Park Ridge, Illinois. Plan B, M.S., 1966, Stout State University, 62 pages: Adviser, Kenneth Erickson.

Purpose of Study--The purpose of the study was threefold. It was intended that content of the Industrial Mathematics course to be taught at Maine East High School would be correlated with content of the Industrial Education courses offered by the school; that the writer would become more familiar with the content of Industrial Mathematics; and that a guide would be produced which could be used by the writer in teaching the subject of Industrial Mathematics at Maine East High School.

Method Used--In preparation for the construction of the course of study, selected secondary and higher education instructors were interviewed as to their thoughts and opinions regarding the selection of course content and the methods of approach that should be used in teaching

Hotchkiss (continued)

the subject of Industrial Mathematics.

A review of literature was conducted to aid in determining both General Mathematics and Industrial Mathematics course objectives, and content and methods of the Industrial Mathematics course.

The course of study was constructed on the unit basis with major emphasis on content and method.

Summary and Findings--The problem in this study was to develop a course of study in Industrial Mathematics which could be used by the writer in teaching the subject at Maine East High School, Park Ridge, Illinois. Content of the course was separated into instructional units based primarily on mathematical operations. All units included application to problems faced in industrial arts and some of the units were devoted entirely to specific subject areas of industrial arts.

The writer was unable to correlate content of the course of study with that of the Industrial Education courses at Maine East High School because of a lack of information.

Many of the problems and operations were designed to be illustrated or demonstrated with the use of models or actual objects. The problem-solving method was thought to be the most effective one for teaching Industrial Mathematics.

Kaiser, Kenneth F., An Experimental Study of Rocketry as a Teaching Unit of Power Mechanics in the Industrial Education Department on the Secondary Level. Plan B, M.S., 1966, Stout State University, 31 pages: Adviser, James Collier.

Purpose of Study--The purpose of this study was to determine whether or not rocketry should be taught as a unit of power mechanics. It is believed that the data accumulated will aid other instructors who are contemplating the teaching of a unit on rocketry.

Method Used--The methods used were the instructing of an experimental unit on rocketry and the compiling of necessary related information.

Summary and Findings--The findings included the following:

1. Rocketry belongs as a teaching unit in the course organization of power mechanics.
2. Rockets can be constructed, tested, and launched with no safety problem to the student.
3. An instructional unit on rocketry can advance to where the student can design, test, and launch his own rocket.

Krall, Raymond G., Revision of the Woodwork Program of the Unified District of Racine. Plan B, M.S., 1966, Stout State University, 82 pages: Adviser, Arnold C. Piersall.

Purpose of Study--The purpose of the study was an attempt to eliminate some of the overlapping of the existing woodworking courses. The study presents course outlines, film list, and a book reference for the woodworking discipline.

Krall (continued)

Method Used--Courses of studies of similiar size schools were reviewed. The writer arranged meetings with the other woodworking instructors, the department heads, and the consultant of the Unified District of Racine. Through the group meetings, desirable teaching materials and references were sought.

Summary and Findings--This study presents the Unified District of Racine with course outlines that suggest teaching materials, reference books, and a film list. The study also provides for continuity in the woodworking program. Since there is a present lack of a flexible course outline, the proposed course outlines should be of assistance to new teachers and those who have been in the system.

Leland, Jay D., A Study, Evaluation and Plan for Use of Programmed Instructional Materials in Electricity-Electronics Classes at Racine Horlick Senior High School. Plan B, M.S., 1966, Stout State University, 23 pages: Adviser, Armand Hofer.

Purpose of Study--The purpose of this study was three fold:

1. To become familiar with the background and principles of programmed instruction.
2. To appraise the programmed materials available in the field of electricity-electronics.
3. To determine the possibility of using programmed instruction in the electricity-electronics classes at Racine Horlick Senior High School.

Method Used--The method used was to review the literature on programmed instruction. Notes were taken on readings with particular concern for selection and use of programmed materials. A check list for visual inspection of programs was formed from these findings. An examination of available programed materials was conducted. All of the information was organized into a logical sequence for drawing conclusions and making recommendations.

Summary and Findings--It was evident that programed instruction is a comparatively new development in education. Therefore there is need for much experimentation and continued study of its various implications. An appraisal of available programs in electricity-electronics was conducted. From the findings of the appraisal a plan was set for trial use. The prospective user of programmed materials must be careful in the selection of the program which best fits his particular needs.

Lerum, Dennis N., Curriculum Guide for Basic Electricity-Electronics. Plan B. M.S., 1966, Stout State University, 45 pages: Adviser, Philip W. Ruehl.

Purpose of Study--This curriculum guide will be used at Sentinel High School in Missoula, Montana, which at this time is initiating a vocationally oriented electricity-electronics program.

Lerum (continued)

Method Used--Literature on curriculum guides concerning their content, uses, and preparation were first reviewed. The review of literature included the Vocational Education Act of 1963 and suggested post high school programs in electricity-electronics. The above programs were made available by industrial firms and post high schools.

From the gathered information materials were selected in accordance to their frequency of appearance and then organized into workable content units.

Summary and Findings--A curriculum guide should not be used as a strict outline of what the courses should contain. The guide is a suggestion; additions and eliminations to it can be done freely to fit specific situations.

Objectives of the curriculum and courses have been stated generally to make the guide more flexible. The units of course content have been broken down to the extent that they eliminate confusion as to what may be included.

Manthei, Daniel R., A Proposed Unit of Instruction for the Conceptual Area of Interference in Communications. Plan B, M.S., 1966, Stout State University: Adviser, W. L. Face.

Purpose of Study--The purpose of this study was to develop a complete unit of instruction for the conceptual area of interference in communications including: (T.C.) teaching content, (T.O.) teaching objectives, (T.A.) teaching activity, (S.M.) student materials, and evaluation.

Method Used--Materials which were previously produced and applicable were used. In undeveloped areas, a documentary analysis was used in selecting materials and collecting information.

Summary and Findings--The findings were the completed unit of instruction for the conceptual area of interference in communications.

Martin, Loren, An Evaluation of the Problem Solving Approach to Teaching Basic Light Building Construction to Freshman University Students. Plan B, M.S., 1966, Stout State University, 71 pages: Adviser, Arnold C. Piersall.

Purpose of Study--The purpose of the study was to develop and experiment with a problem-solving approach to teaching light building construction. More specifically, it was concerned with a problem-solving method of teaching traditionally accepted construction techniques.

Method Used--An experimental study was conducted in a college classroom and laboratory using regularly enrolled freshman students. A pilot study was conducted and two instructors were asked to participate in the experiment. Another section was also taught so that four classes (83 students) were involved in the problem-solving approach.

Martin (continued)

Summary and Findings--A review of literature was conducted to develop the rationale for the problem-solving approach. The approach used in this study appears to be a realistic method of using problem-solving as a teaching method. Comments from instructors and students were used in evaluating the method.

Moegenburg, Louis A., An Occupational Survey of the Leading Industries that Employ Draftsmen in the Neenah-Menasha Area. Plan B, M.S., 1966, Stout State University, 41 pages: Adviser, Herbert A. Anderson.

Purpose of Study--The purpose of the study was to ascertain (1) the potential of industrial employment of high school graduates in drafting occupations at the entry level, (2) technical competencies required of high school graduates by industry in the drafting profession, (3) related secondary school courses desired by industry for graduates in drafting, and (4) character and personality traits desired by industry of those graduates entering the drafting profession. Many students enrolled in industrial arts courses are taking them without any pattern or sequence for future employment. These courses are "filler courses," or courses needed to fill their schedule. There is a need for a planned sequence of courses, both academic and shop, to guide the non-college students.

Method Used--The device used to gather information was the survey questionnaire. This instrument, after many revisions, was subjected to a jury of four members in industry that hired draftsmen. An evaluation of the jury suggestions was them made. Some suggestions were used to revise the instrument until the final draft was accepted. The questionnaire was mailed to forty industries and employers of draftsmen in Neenah, Menasha, Appleton, Kimberly, and Kaukauna. There was a total of thirty returns, of which 27 were usable for the study.

Summary and Findings--The findings included the following:

1. Structural drafting was the type used most frequently.
2. Industry will accept a qualified graduate from a high school or post high technical school with little or no experience.
3. Mathematics, physics, English, and drafting were the high school courses recommended as a good background for the drafting occupations.
4. The entry level worker should be dependable, industrious, thorough, mentally alert, and capable of working with other people.

Myers, Wilburn R., An Occupational Survey for the Development of a Vocational Curriculum at Menomonie High School (1966). Plan B, M.S., 1966, Stout State University, 18 pages: Adviser, E. Robert Rudiger.

Myers (continued)

Purpose of Study--The basic purposes of this study were: (1) to provide a basis for establishing a vocational curriculum for high schools in Wisconsin communities which have limited industry and a population similar to that of Menomonie; (2) to ascertain what vocational courses should be established in the high school based on the results of the community survey; (3) to secure occupational information about the community which will help in vocational guidance; and (4) to ascertain the possibility for establishing a cooperative work experience program for the vocational students at Menomonie High School.

Method Used--The development of an interview schedule provided the basis for the community occupational survey. The survey was carried out by the Local Vocational Coordinator, the guidance staff, and members of the teaching staff. The results of the survey were tabulated and listed according to occupational categories as listed in The Dictionary Of Occupational Titles. Tables have been used to list the occupational categories, and to provide employment for each of the occupational areas.

Chapter III is conclusions and recommendations based on the report of the findings.

Summary and Findings--Business and distributive occupations are the basis of 73 percent of the business establishments in Menomonie. Nineteen percent are trade and industry, and eight percent are in home economics and mixed occupations.

Employment in the distributive, business, and trade and industry areas account for 70 percent of the work force of which approximately 30 percent are considered part time. A more detailed listing of employment accounts for 49 percent of the employees in the professional, technical, managerial, clerical, and sales categories.

The business and distributive areas provide the greatest opportunity for a cooperative training program.

O'Bryon, James R., A Plan for the Development of a Vocational Education Pilot Program in Woodworking at Spooner High School, Spooner, Wisconsin. Plan B, M.S., 1966, Stout State University, 45 pages: Adviser, Armand G. Hofer.

Purpose of Study--The purpose of the study was to set up criteria for developing a new course, building construction, to be incorporated into the total Industrial Arts program, that will be beneficial to the students while at the high school level, so that after leaving high school they may seek employment or enter into an apprenticeship program.

Method Used--Books, pamphlets, and periodicals on vocational education were reviewed. Information was gathered from seventeen area vocational schools offering woodworking programs. Their course outlines were reviewed. Woodworking pamphlets were also reviewed. Two local area vocational-technical school coordinators were interviewed as to their requirements for students entering their schools.

O'Bryon (continued)

A citizens committee was selected from the different occupations to advise the school's vocational program as to the qualifications needed in the various areas of business.

Summary and Findings--Under the Pre-Vocational Pilot Program, Sponner High School is adding a building construction course to be offered to junior and senior boys for two semesters. Besides building construction, the plan includes a special math class for vocational students. Upon completion of high school the vocational student may enter a vocational school to further his education, and to take on-the-job training through the apprenticeship program.

Rau, Gerald N., A Welding Survey of Kenosha Industries for the Kenosha Technical Institute. Plan B, M.S., 1966, Stout State University, 34 pages: Adviser, William W. Mamel, III.

Purpose of Study--The purpose of this study was to obtain and compile occupational information from the Kenosha County industries in the welding field. Because many Kenosha Technical Institute welding graduates are employed by Kenosha industries, this survey and other available data were used to assist in evaluating and improving the present Kenosha Technical Institute welding program so that a student might be better prepared for employment as a welder.

Method Used--Data for this survey was obtained from local industries in the city and county of Kenosha. In order to begin the survey, support from local industries was necessary. Mr. Eugene Lehrmann, Director of the Kenosha Technical Institute, introduced this survey to industry through a letter sent from his office. Enclosed in each letter was a stamped, self-addressed post card. The post card indicated the time and date the interview was to be conducted between the welding instructor and the welding supervisor. If the designated time and/or date proved unsatisfactory, a check was made on the post card and a new appointment was scheduled by telephone.

The survey was conducted by using an interview schedule form. The welding instructor used that instrument to help compile the data. A total of 35 welding supervisors were interviewed in this study.

Summary and Findings--A review of this study indicates a number of facts and particular opinions which are characteristic of many welding industries within the Kenosha area. A critical summation of the data revealed that:

1. Of a total of 363 individuals employed as weldors, 7 were female and 356 were male weldors.
2. Forty percent of the respondents specified some special training as an educational requirement while 37.14 percent required only a high school education.
3. Sixty percent of the interviewers indicated they would like their employees to have post-high vocational training.
4. None of the supervisors interviewed thought it was necessary for a weldor entering the welding field to have a college education.

5. The electric arc welding process was used most frequently by 91.42 percent of the firms surveyed.
6. The oxy-acetylene flame cutting process was used in 82.9 percent of the industries for metal cutting.
7. Those firms surveyed used the combination AC/DC and DC motor generator welding machines most frequently.
8. More than 88 percent of the respondents indicated it was necessary for a weldor to adjust the welding machine.
9. That a weldor should possess the skill to set-up-job was revealed by 82.9 percent of the interviewees.
10. Eighty-eight percent of the firms used mild steel for fabrication purposes.
11. The Miller welder is the most common weldor used in over 51 percent of the industries surveyed.
12. Over 62 percent of the respondents indicated they used the stainless steel electrode most frequently.
13. For mild steel welding, the A.W.S. classification E6010 and E6013 all position electrodes were most frequently used.
14. Blueprint reading was indicated by 94.29 percent of the supervisors as the related course most beneficial to a welding student; while 71.43 percent felt mathematics and mechanical design were extremely important.
15. Thirty-three of the 35 firms surveyed, checked that welding in the flat position was performed most frequently.
16. Over 57 percent of the firms interviewed reported it was necessary to weld competently in all positions; 42.86 per cent indicated it was desirable but not necessary to weld in all positions.
17. Only 6 of the 35 firms interviewed required some type of certification; weldor certification depended primarily upon the particular industry and job classification.
18. Several respondents indicated an interest in purchasing welders to be used for gas tungsten-arc, gas metal-arc (wire drive unit) and resistance welding.
19. Many of the supervisors expressed interest in the electron beam and laser beam processes.
20. Several firms are anticipating incorporating the gas tungsten-arc and gas metal-arc (wire drive unit) welders in their particular industry.
21. Over 74 percent of the firms interviewed, indicated there would be a slight increase in the employment of weldors within the next five years.

Rokus, Richard A., A Proposal for the Consideration of an American Industry Program At Port Washington. Plan B, M.S., 1966, Stout State University, 111 pages: Adviser, Wesley L. Face.

Purpose of Study--The purpose of this study was to prepare a proposal for consideration of the American Industry concept at Port Washington for the ultimate goal of instituting an introductory American Industry course and the eventual possibility of replacing the traditional program.

While an ultimate aim of this proposal is the implementation of the American Industry program, it was not within the realm of this study to develop the introductory course and subsequent program, or to provide for the actual implementation.

Method Used--In view of the primary aim for the orientation of the curriculum organization, administration, and faculty of Port Washington in respect to the merits of the American Industry conceptual approach, the proposal was developed as follows:

1. A review of literature in regard to the American Industry concept.
2. A comparison of the conceptual approach as used in American Industry and the traditional program at Port Washington.
3. Preparation of a sample set of teaching materials to illustrate the approach and content of American Industry.
4. An analysis of problems and a suggested procedure for the implementation of American Industry at Port Washington.

Summary and Findings--The present traditional Industrial Arts program at Port Washington exhibits a number of serious deficiencies and is in need of thorough revision. One of the most logical choices as part of this needed curriculum revision is the introduction of American Industry, which may in the future be further evaluated in terms of additional expansion.

Stair, Frederic C., A Recommended Technical Program in Auto Mechanics for the Coleman Techncial Institute. Plan B, M.S., 1966, Stout State University, 27 pages: Adviser, Lee H. Smalley.

Purpose of Study--The purpose of this study was threefold. There should be the provision procedure introducing other new curriculum areas for vocational and technical schools. Also, there will be information on hiring for better placement. Finally, this study provided vital information in validating the new curriculum in Automotive Technology.

Method Used--A survey involving the use of a questionnaire was sent to approximately 100 selected auto dealers throughout a designated area. Interviews were used to obtain personal information from future employers.

Summary and Findings--One hundred percent of the auto dealers surveyed indicated there would be employment opportunities within their organization. The levels of service: salesman, partsman, promoting agent, and mechanic, which show the greatest need for employment, are covered in the automotive curriculum. There is strong evidence that the mechanic is indespensable as 100% of the contacts show. Opportunities for advancement are evident as 73% of the cases reported the service manager came from within the surveyed organization. The indicated salary levels seem to be a desirable factor in placement. One point of vital information was the importance of adding a business course to the curriculum.

Stephenson, Leon A., The Development of a Programmed Unit in Lumber Measurement. Plan B, M.S., 1966, Stout State University, 44 pages: Adviser, A. C. Piersall.

Purpose of Study--The purpose of this study was to develop programmed instruction materials for teaching lumber measurement in the high school woodworking class.

Method Used--The information for this study dealing with programmed instruction and lumber measurement was compiled from materials located in the library at Stout State University, Menomonie, Wisconsin. The procedures used in solving the lumber measurement problems were recommended by authors of several books on technical mathematics and carpentry.

Summary and Findings--Research studies have indicated that both training time and teaching time can be reduced by the use of programmed learning. Teaching programs do work well for the gifted, for the average student, and for those who are below average.

Stillman, Karl W., A Survey of Power Mechanics Content Area in Wisconsin. Plan B, M.S., 1966, Stout State University, 36 pages: Adviser, James Daines.

Purpose of Study--The purpose of this study was to determine the content areas which are covered in power mechanics at the secondary school level in Wisconsin. The information will be used as a guide for those who wish to develop comprehensive courses of power.

Method Used--A survey instrument was developed from various sources. The instrument was sent to all schools in the state known to have power mechanics in their course offerings. All data from the returned instruments were tallied and analyzed; the findings were presented in summary tables.

Summary and Findings--The instrument revealed a definite tendency on the part of the respondents to heavily emphasize the two and four stroke cycle internal combustion engine theory and systems service. Five sections appeared to have areas which were not offered by a majority. These areas were: Rotary combustion engine, rockets, atomic reactors, hydraulics and pneumatics. The remainder of the areas surveyed did not offer definite tendency.

Sugden, Robert D., Resource Unit on the Laser. Plan B, M.S., 1966, Stout State University, 79 pages: Adviser, Philip W. Ruehl.

Purpose of Study--The purpose of this study was to compile all of the resource materials and sources presently available in the area of laser development. And then, to use the findings of this study to construct a resource unit which teachers can go to for suggestions when developing a teaching unit on lasers.

Sugden (continued)

Method Used--A normative survey type of research was used in conducting this study. A review of the literature on resource units was made and then literature and materials pertinent to the topic of lasers was compiled.

This review of literature and materials presently available were gathered by writing laser manufacturers and research centers, reviewing books, periodicals and film catalogues. The information was then analyzed and catalogued according to its pertinents to the topic, for future use by instructors desiring information on lasers.

Summary and Findings--The resource unit is a valuable educational tool in helping teachers keep up-to-date on the latest resource materials and in freeing them from the restrictions of a textbook originated course.

An unlimited and up-to-date source of the latest developments in laser research and development is available from manufacturers.

The visual aids in the field of lasers are very limited, especially scarce are films and filmstrips.

Tank, Frank A., Development of Instructional Materials For Use in a Contact Printing Unit Relative to Offset Lithography on a Vocational Level. Plan B, M.S., Stout State University, 1966, 44 pages: Adviser, Lloyd Whydotski.

Purpose of Study--The purpose of this study was to select and list material pertinent to developing and understanding contact printing. It was planned that this unit become a part of a complete offset camera resource unit. It was further hoped that this resource unit would furnish suggestions to teachers, supervisors and curriculum planning committees for their use for planning teaching units and would also provide general supplemental information.

Method Used--The method included:

1. Review of the literature to include photographic materials and darkroom procedures.
2. Gather information regarding industrial procedures and methods as published in industrial periodicals.
3. Conduct experimental projects in the school laboratory utilizing school personnel.
4. Compile the results of all information obtained through experimentation at the class room level and information obtained regarding industrial procedures and methods.
5. Analyze the results.
6. Present findings in the form of practical projects and step-by-step instructional procedures.

Summary and Findings--Industrial trends show a greater separation between contact printing work and normal process camera work. Contact printing is becoming more accurate in nature and has established itself as a separate trade skill.

Contact printing provides an excellent approach to camera work. This area provides more work stations at less cost.

Twait, Dean V., Evaluation of the Albert Lea (Minnesota) High School Home Economics Program with Implications for Change Based on a Study of Teenage Marriage in Freeborn County and of Teenager Preference and Needs Related to Home Economics. Plan B, M.S., 1966, Stout State University, 51 pages: Adviser, Miss Turney.

Purpose of Study--The purpose of this study was to ascertain a basis for change needed in curriculum as a result of technological development, economic and social changes which have affected the patterns of family living in the homes of girls in Albert Lea High School.

Method Used--To obtain the information provided by this study, a questionnaire was prepared and given to 675 senior high school girls during home room, one sheet for the girl and a second sheet for her mother. The home agent for Freeborn County was interviewed to explain the 4-H program and obtain the number of senior high girls active participants in this program. The register of deeds office was contacted for the statistics on teenage marriages in Freeborn County during the year 1965. A study was made of the new Minnesota Home Economics Curriculum Guide in light of the findings to suggest revision of the present home economics curriculum to meet the preferences of the students and their needs as seen in the curriculum guide which will be adapted to fit the specific needs of the students at Albert Lea High School.

Summary and Findings--On the survey returned by the girls the areas ranked as most beneficial were foods and clothing. Child care was ranked third, then housing and preparation for marriage. Statistics from 1965 in Freeborn County (Minnesota) showed 50 percent of the girls that married were 20 years of age and younger with national statistics showing 40 percent of today's brides are between the ages of 15 and 18. The mothers' comments were favorable about the experiences their daughters have had in homemaking. The 4-H program showed more interest in the foods and clothing area where there is over-lap with the homemaking curriculum. Nine percent of the senior high girls are active in 4-H programs.

After considering the perferences and needs of the high school girls, and in light of the new Minnesota Curriculum Guide, additional child care, responsibilities of marriage and short cuts in foods and clothing should be planned in the curriculum.

Watts, Harry E., A Survey of Existing Vocational and Industrial Arts Programs of Member Schools of the Western Conference of Training Schools. Plan B, M.S., 1966, Stout State University, 24 pages: Adviser, E. Robert Rudiger.

Purpose of Study--The purpose of this study was to learn what types of industrial arts and vocational education programs were offered in correctional institutions. It was felt this data would help in setting up new industrial arts and vocational education programs and aid in evaluating and refining present industrial arts and vocational education programs in juvenile correctional institutions.

Watts (continued)

Method Used--The method of research used in this study was the survey. A questionnaire was mailed to forty member schools of the Western Conference of Training Schools. Twenty-nine of the forty were returned and used in this study. The study was limited to institutions handling male juvenile inmates.

Summary and Findings--

1. All correctional institutions studied had students that could benefit from instruction in either industrial arts or vocational education.
2. Most institutions offered industrial arts and vocational education courses.
3. Very few courses were offered in business education or agriculture. No institution offered distributive education courses.
4. The average length of stay of a student in a correctional institution was different from a normal school year. Class period length and course length varied greatly among the institutions studied.
5. Most institutions did not require prerequisites for either industrial arts or vocational education courses.
6. Field trips were used frequently in correctional institutions.
7. Most institutions offered related vocational courses.
8. Nearly one-fourth of the institutions offered diversified occupational training.
9. Nearly one-fourth of the institutions counted vocational courses toward apprenticeships.

Whitt, Boyd R. Jr., *Development of a Selected List of Research Problems for Students in Junior High School General Shop.* Plan B, M.S., 1966, Stout State University, 24 pages: Adviser, Jack Sampson.

Purpose of Study--The purpose of this study was to develop a selected list of research problems to be used as supplementary teaching materials for the junior high school general comprehensive shop.

Method Used--The major method used in this study was a review of literature. The review of literature was conducted with three purposes: (1) to determine the merits of using research problems as a method of teaching industrial arts in junior high school, (2) to develop criteria for use in the selection of research problems suitable for junior high school industrial arts students, and (3) to locate research problems meeting the above criteria.

Summary and Findings--The use of research is instrumental in learning. It is a means through which changes in behavior can take place. Research provides an opportunity for experiences in various activities. It is necessary to make these activities interesting and within the mental and physical capacity of the student. The research problem itself should not be the prime factor. The real value of research should be in how much learning or behavioral change takes place through its use.

Wilcox, Garth E., An Occupational Survey of Tomahawk, Wisconsin - An Occupational Survey to Determine The Occupations Represented in the Tomahawk Area. Plan B, M.S., 1966, Stout State University, 34 pages: Adviser, E. Robert Rudiger.

Purpose of Study--The purpose of the survey was to ascertain the preparation needed by the students in choosing, entering, and progressing in occupations in the Tomahawk area. More specifically, the purpose of this survey was:

1. To become better acquainted with the occupational situation in the Tomahawk area.
2. To determine the type and need for guidance services to youth and adults of the community.
3. To determine how adequately the Tomahawk schools meet the needs of the community.
4. To determine the need for adult education courses in the community.
5. To implement curriculum planning, guidance, and placement services in the Tomahawk High School, and the Tomahawk School of Vocational and Adult Education.

Method Used--The information in this study was obtained through personal interviews of the industrial, business, and service firms in the Tomahawk area. The interview schedule was prepared during the summer session at Stout State University in 1965. The interviews were conducted by teachers from the Tomahawk public school system during the 1965-66 school year. The data was then tabulated and interpreted to furnish the results of this study. Announcement of the survey was sent through letters prior to the actual survey.

Summary and Findings--This study was conducted for the purpose of gathering facts and opinions pertaining to the future development of the Tomahawk High School and the Tomahawk School of Vocational and Adult Education.

Facts and opinions were obtained concerning the following: (1) Occupational information to help the high school program, and the vocational and adult education program, (2) Data that will help the guidance program, and (3) To ascertain occupational trends and opportunities in Tomahawk.

In general, the information obtained in this study brings into focus the following:

1. The industries in Tomahawk are fairly diversified.
2. The largest groups of workers are in the "clerical and sales" categories.
3. The greatest number of workers (63.3 per cent) are found to be employed in the "professional, technical, and managerial," "clerical and sales," "service," and "processing" occupational divisions.
4. The work force in Tomahawk is relatively young.
5. Opportunities for advancement on the job rate from relatively fair to poor.
6. A minimum of high school education is needed in most occupations.
7. The industries in the Tomahawk area are rather static as far as growth is concerned.

Wilcox (continued)

8. The future need for workers in the occupations shows a slow growth.
9. Many employers indicate a need for special vocational training.
10. More emphasis should be placed on vocational courses at the high school level.
11. Educational opportunities should be expanded at the adult educational level.

Williams, Ione M., Programmed Instruction versus Traditional Methods for Teaching Nutrition. Plan B, M.S., 1966, Stout State University, 63 pages: Adviser, Mildred Turney.

Purpose of Study--The purpose of the study was to find a teaching method which would increase the knowledge of nutrition to a greater degree than traditional methods. The problem was to ascertain the progress of students who used a programmed text in nutrition and to compare this with the progress of a like group who were taught by traditional methods.

Method Used--After the review of the current philosophy of programmed instruction was related to the accepted laws of learning, two like classes from seventh grade home economics were formulated according to each of the class averages of the student's intelligence, reading, and previous home economics grade point scores. Matched pairs were equated on the basis of their reading scores. Intelligence scores did not indicate ability to read which is essential in using a programmed text. The experimental group used a Behavioral Research Laboratories programmed test, Nutrition, and the control group was taught by traditional methods, simultaneously, for ten weeks. The same integrated teaching methods for application of the factual knowledge, and the same test for pre and post-testing to assess the effectiveness of the method were used for both groups. There was a null hypothesis.

Summary and Findings--The measure used for the statistical treatment of the raw data was the Wilcoxon matched-pairs signed-rank test which states that in order to reject the null hypothesis for twenty one matched pairs, a T value of less than fifty nine at the .05 level of significance is necessary. Since the T obtained was fifty three, the conclusion was that students who used the programmed text showed significant gain in knowledge of nutrition. Therefore, the null hypothesis was rejected.

Wollum, Gordon O., A Study of Parental Attitudes Concerning Need for, Facts Discussed, and Acceptance of a Unit of Self Understanding as an Outgrowth of Personality Development of Boys and Girls Around Puberty. Plan B, M.S., 1966, Stout State University: Adviser, Evelyn G. Rimel.

Purpose of Study--The purpose of this study was to determine the attitudes of parents concerning the feasibility of providing a unit of

Wollum (continued)

study on developing self-understanding as an outgrowth of a unit on personality development of boys and girls around puberty in the sixth grade elementary program at Boyd Elementary School in Eau Claire, Wisconsin. This experiment was to serve as a pilot study in the Eau Claire Area Schools.

Method Used--The processes used in developing this study were: (1) Review of literature, (2) interviews with school personnel, (3) group discussion and showing of proposed material for unit with parents of experimental group, (4) sending home an information questionnaire to parents, (5) teaching of the unit, (6) parental interviews, (7) sending home follow-up questionnaire to parents, (8) and compilation of data from the questionnaires.

Summary and Findings--It is believed that the information obtained from this study and experiment has been a valuable contribution in the education of sixth grade students in the Eau Claire Area Schools. It has demonstrated that such a unit is needed, accepted, and appreciated both by the children and their parents. Without a doubt such a unit should become a part of the city wide curriculum for sixth grade science.

Zuerlein, John G., A Statistical Study of the Technical Electives of Industrial Education Majors With General Shop Concentrations at Stout State University - June 1963-June 1966. Plan B, M.S., 1966, Stout State University, 107 pages: Adviser, Jack Sampson.

Purpose of Study--The purpose of the study was to determine the functional value of a recommended list of courses for industrial education majors concentrating in General Shop.

Method Used--Data was collected and divided into two areas. The two areas were (1) number of students enrolled in courses and (2) percentage of students enrolled in courses.

Summary and Findings--Students were not following the list. More emphasis should be placed on the list.

III

Evaluation

"In the school, where the chief objective is the promotion of learning, evaluation plays a definite important role."*

Only three studies were classified as falling under this category. They generally were concerned with:

1. Counselor Training.
2. Program Evaluation.

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*Cf. Courtney, loc. cit., p. 303.

Bennett, Lawrence L., An Analysis and Evaluation of Selected Graduate Counselor Education Programs and the Program at Stout State University. Plan B, M.S., 1966, Stout State University, 70 pages: Adviser, R. G. Iverson.

Purpose of Study--The purposes of this study were to:

1. Analyze some of the major aspects of various graduate counselor education programs being offered in colleges and universities in the U. S. today.

2. Analyze and evaluate Stout State University's graduate counselor education program.

Method Used--

1. A letter was sent to colleges and universities offering graduate work in counseling and guidance requesting their catalog.
2. These catalogs were studied and twenty programs were selected for analyzation.
3. A questionnaire was formulated and sent to Stout State University's counselor education graduates regarding Stout's program.
4. Summaries and conclusions of the above steps were formulated.

Summary and Findings--Schools offering graduate work in counselor education have generally developed a philosophy of counseling that requires a prospective student to display a genuine interest in young people and to be educated broadly in both counselor theory and practice.

Stout's program compares very favorably with the program of the other schools offering graduate work in counselor education.

Bolliger, Frederic L., An Evaluation of the Male Counselor Training Period at YMCA Camp Manito-Wish, Boulder Junction, Wisconsin. Plan B, M.S., 1966, Stout State University: Adviser, E. R. Oetting.

Purpose of Study--It was the purpose of this study to evaluate the male counselor training period at Young Men's Christian Association Camp Manito-wish in order to: (1) Identify camper behavioral problems most commonly observed by counselors and staff members; (2) Find the strengths and weaknessess in the training of camping and canoeing skills; (3) Develop recommendations for a possible revision of the present training session in the areas of skill development and human relations. It was assumed that these three purposes will better equip counselors in out-door living and develop a more meaningful relationship between the counselor and the individual camper.

Method Used--The survey was conducted by the descriptive survey method which consisted of a four part questionnaire obtaining personnel data, camping and canoeing preparation, identification of camper behavioral characteristics, and suggestions for the improvement of the training period in camping skills and human relationships with campers. A rating scale was utilized to determine the skill preparation counselors received. The paired comparison technique, first used by Thurstone, was employed to identify camper behavioral characteristics. The population consisted of eighty staff members from the 1964 and 1965 Manito-wish camping seasons.

Summary and Findings--Counselor training in developing camping and canoeing skills was viewed as needing only minor changes. First aid, map reading, and menu planning need greater emphasis in the counselor training session. Staff members feel a definite need to develop a more thorough understanding of a campers problems and his needs. The troublesome behavioral characteristics manifested in irresponsibility, poor table manners, complaining, and selfishness need greater emphasis and understanding in the training period.

Lehman, Ruth J., An Analysis and Evaluation of Selected Graduate Counselor Education Programs and the Program at Stout State University. Plan B, M.S., 1966, Stout State University, 70 pages: Adviser, R. G. Iverson.

Purpose of Study--The purposes of this study were to:

1. Analyze some of the major aspects of various graduate counselor education programs being offered in colleges and universities in the U. S. today.
2. Analyze and evaluate Stout State University's graduate counselor education program.

Method Used--

1. A letter was sent to colleges and universities offering graduate work in counseling and guidance requesting their catalog.
2. These catalogs were studied and twenty programs were selected for analyzation.
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IV

Guidance

> "Generally speaking, the greater the number of relevant experiences that an individual has confronted himself with in a given area, the larger will be the associations he will possess as tools for solving problems in that area."*

Guidance studies at Stout have increased in numbers during recent years. The following subject matter areas exemplify this enlargement of effort:

1. Career Choice Information.
2. College Success Factors.
3. Counselor Roles.
4. Follow-up Studies.
5. Guidance Information Sources.
6. Guidance Services.
7. Head Start Projects.
8. Motivation Factor.
9. Parental Attitudes.
10. Personnel Services Plans.
11. Problems For Counseling.
12. Student Activities.
13. Student Characteristics.
14. Test Prediction.
15. Trait Analysis.
16. Work Study Programs.

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*Cf. Courtney, loc. cit., p. 94.

Blinkman, Neal F., The Predictive Value of a Mechanical Reasoning Test. Plan B, M.S., 1966, Stout State University, 30 pages: Adviser, E. R. Oetting.

Purpose of Study--The goal of the study was to ascertain if The Psychological Corporation's Mechanical Reasoning section of their Differential Aptitude Test Battery may be used as a criterion for the selection and placement of students in industrial arts classes at Benton Harbor High School, Benton Harbor, Michigan.

Method Used--During the latter part of September, 1965, the industrial arts teachers at Benton Harbor High School administered The Psychological Corporations's Mechanical Reasoning Test to the students in their classes. The tests were scored, and the scores were then converted to percentile ranks. The students were grouped according to their experience in industrial arts, and the percentile ranks were compared with semester grades to arrive at a correlation for each group.

Summary and Findings--The correlation (obtained by using the Pearson Product-Moment Correlation, Assumed Mean Technique) was plus .44 for group one, which consisted of ninety-nine students enrolled in their first industrial arts class. The two hundred fifty students in group two, who had been enrolled in previous industrial arts courses, had a correlation of plus .46. The correlation for group three, which consisted of two hundred twenty-two student enrolled in advanced industrial arts courses, was plus .49.

Brungraber, Richard W., A Study of the Relationship Between Certain Temperament Traits and Grades Earned in Speech and Mathematics by Selected Probationary Students Who Later Graduated From Stout. Plan B, M.S., 1966, Stout State University, 42 pages: Adviser, Evelyn G. Rimel.

Purpose of Study--The purpose of this study was to determine the value of the active, cordial, and sympathetic sections of the Johnson temperament Analysis as a predictor of successful achievement in speech and mathematics by selected probationary students who graduated in education or technology.

Method Used--The following methods were used: Review of literature, Selection of students for study, Administration of the Johnson Temperament Analysis Profile, and Statistical Correlation using the Pearson "R" method and the Doolittle Multiple Correlation method.

Summary and Findings--There was no significant multiple correlation either within the studied groups or between the studied groups.

Chambers, James C., A Proposed Plan Whereby Counselors May Help Counselees With Religious Problems. Plan B, M.S., 1966, Stout State University: Adviser, John Duling

Purpose of Study--To ascertain if there was, and to what degree, an incidence of religious problems among the students of a random sampling of high school and state colleges or universities in the State of Wisconsin.

Method Used--A letter and a questionnaire was sent to a random sampling of fifty high school counselors, and eighty sent to the state college counselors, to determine the existence of religious problems.

Summary and Findings--The statistical findings from the questionnaires returned, indicated that from the collective total of counselors 40% had met with religious problems; 60% had no occasion to counsel this type of problem. The study revealed a need for orientated counselors who could help in this area when approached.

Daniels, Richard E., Motivating Factors of Stout State University Students Who Major in General Shop. Plan B, M.S., 1966, Stout State University, 28 pages: Adviser, Jack B. Sampson.

Purpose of Study--The main purpose of this study was to identify factors that motivate students to specialize in the general shop program at Stout State University.

An associated purpose of this study was to provide guidance counselors and teachers with information to be used to more effectively guide students in selecting vocations associated with industrial arts.

Method Used--The material for this study was obtained through a review of literature that pertained to motivation; and a questionnaire that provided data regarding why students were participating in the general shop program at Stout State University.

The data gathered was processed by tabulation of the responses into a frequency distribution. The number of responses were than converted into percentages to give a better comparison of the results of the questionnaire.

Summary and Findings--The typical students in general shop would be individuals who were encouraged by their high school industrial arts teacher to enroll into general shop.

The students' main motive for majoring in general shop is to develop a broad knowledge of industrial arts.

The majority of the general shop students would start teaching in a senior high school and would probably remain there.

Galoff, Freeman N., An Analysis of the Factors Influencing Career and University Choice for the 1965-66 Freshman Class at Stout State University. Plan B, M.S., 1966, Stout State University, 30 pages: Adviser, Ralph G. Iverson.

Galoff (continued)

Purpose of Study--The central purpose of the study was to assist the Stout State University Coordinator of School Relations in determining the most effective ways to communicate with prospective students.

Method Used--The method used was to administer a "School and Career Choice Influencing Factors Questionnaire" to the selected population. The selected population was the 1965-66 Freshman Class of Stout State University. There were 880 students in the selected population and the entire population was used in the study. The data were compiled, analysized and summarized. Conclusions and implications were drawn from the data.

Summary and Findings--The findings were catagorized under the following main classifications of factors that influenced the choice of the population: (1) Influence of Persons, (2) Influence of High School Experiences, (3) Influence of College Experiences, and (4) Influence of Other Factors. Conclusions were drawn. The results were as follows: Most influence by Persons: Parents and H. S. Counselor. Most influence by H. S. Experience: Interest in particular subject and Studying Vocations. Most influence by College Experience: College materials and visit to the University. Most influence by other Factors: Economic and Social advantages of occupation.

Garcia, Levy R., Personnel Services Plan for the Public Secondary Schools in the City of Manila, Philippines. Plan B, M.S., 1966, Stout State University, 98 pages: Adviser, Robert Wurtz.

Purpose of Study--The ultimate aim of this study was to develop for the public secondary schools in the City of Manila an improved program of personnel services by determining the criteria of a well-developed program of guidance services, by eliminating those which were not applicable to the 36 high schools.

Method Used--A general study was made of the available literature on the subject of developing an organized and effective personnel services program. A survey and review of books, magazines, periodicals, pamphlets and other printed materials was made on information pertinent to the study.

Summary and Findings--Conclusions drawn from the sources mentioned above were analyzed and applied to the educational system of the public high schools in the City of Manila. This study will serve as a reference for improving the present guidance services in the Philippines.

Hight, Eldon P., An Analysis of the Student Activities Program at Chetek Senior High School. Plan B, M.S., 1966, Stout State University, 62 pages: Adviser, Ralph G. Iverson.

Purpose of Study--The central purpose of this study was to evaluate the activities program at Chetek Senior High School in terms of student participation, and to provide information regarding the future planning of the school program in terms of the variables studied. In a recent North Central Association evaluation, it was suggested that such a study be conducted.

Method Used--The project followed the major steps as shown below:

1. The development of an instrument to be used for the study in the measurement of school attitudes and participation.
2. The selection of the population for the study.
3. The administration of the instrument to the selected population.
4. The compilation and analysis of data collected for the study.
5. The formulation of conclusions and implications in terms of the problem statement.

Summary and Findings--The following are findings that resulted from an analysis of the data in the report:

1. Ninety point four per cent of the student body are participating in at least one activity, with girls being more active than boys, and upperclassmen being more active than underclassmen.
2. Transported students participated in the student activities program to about the same degree as the nontransported students.
3. Scholastic achievement was directly related to activity load.

Hokanson, Robert F., A Study of the Effectiveness of Group and Individual Interpretation of Differential Aptitude Tests. Plan B, M.S., 1966, Stout State University, 49 pages: Adviser, E. R. Oetting.

Purpose of Study--The basic purpose of the study was to evaluate Differential Aptitude Test interpretation procedures at Whitnall Junior High School and to determine the need of modification of these procedures. The existing procedure called for an individual test interpretation conference with each eighth grade student. The intent of the study was to see if group interpretation conferences could be used to present basic information so that the counselor would have more time available for personal conferences that may be needed.

Method Used--Two groups were established for comparative purposes, each group was formed by balancing the number of boys and girls in the groups and by balancing the ability of the students in each group. In order to establish like ability groups the combined verbal reasoning-numerical ability scores of the Differential Aptitude Test was used. Each group was given a checklist to measure ten understandings about the DAT and then the percentage of error of each group was established.

Summary and Findings--The percentage of error of group and individual interpretation was very similar as was the percentage of error of boys and girls. It would seem that group interpretation of the Differential Aptitude Test is about as effective as individual interpretation of the test results.

Larson, Robert J., A Proposed Work Study Program For Selected Students In Boyceville High School. Plan B, M.S., 1966, Stout State University, 28 pages: Adviser, Ralph G. Iverson.

Purpose of Study--Educators are constantly seeking new programs to give students a broader educational foundation from which individual potential can be developed. The high school curriculum, in many cases, cannot provide all the services necessary for total student developmant. Therefore, it is necessary for educators to seek new avenues that might better prepare our youth for the future.

The basic purpose of this study was to determine certain criteria for a well-developed work study program for slow learners in Boyceville High School.

Method Used--The basic method for selecting the population was based on the results of the Henmon Nelson Test of Mental Ability. The Wechsler Adult Intelligence Scale was also used to identify student mental ability more accurately.

Student interest was determined after taking the Kuder Perference Record.

Student desire to participate in the work study program was determined through group and individual counseling sessions.

Summary and Findings--There is a real need at Boyceville High School for a work study program. The work study program should reach out to the slow learners in an effort to help them develop individual potential. Certain students will need special training in areas such as reading. Several students were identified during the work study testing as reading problems.

Further study is needed to improve the work study facilities in the school and the community.

Leisemann, Warren L., A Study of the College Success of Fourth Quartile High School Students. Plan B, M.S., 1966, Stout State University, 23 pages: Adviser, R. G. Iverson.

Purpose of Study--The purpose of the study was to evaluate whether it was worthwhile for students in the lower one-fourth of their high school graduating class to attempt to enter Stout.

Method Used--A selected populations academic records were analyzed for length of attendance, cumulative grade point, and percentage earning a 2.00 grade point.

Summary and Findings--Although a few individuals do quite well, these students generally achieve poor records. The probability of college success for this population appears extremely low.

Marshall, Ralph R., Guidance Information Articles Reported in the Industrial Arts and Vocational Education Magazine in the 1950-1965 Period. Plan B, M.S., 1966, Stout State University, 32 pages: Adviser, G. S. Wall.

Marshall (continued)

Purpose of Study--The purpose of this study was to determine if the selected articles were concerned with the qualifications of the job, preparations, advancement, earnings, working hours, duties, and the method--that is, how to inform the student? This would include field trips, parent's night, audio visual aids, bulletin boards, and others. Or are these articles a combination of both?

Method Used--The study makes an evaluation of one of the leading magazines in industrial education to determine how and what is given in terms of guidance. This study was restricted to guidance articles available in the Industrial Arts and Vocational Education magazine from 1950-1965.

Summary and Findings--The majority of the articles found in this study pertained to the preparation (26 articles), qualifications (16 articles), related occupations (10 articles), and earnings (10 articles) of workers.

Neverdahl, William J., A Follow-up Study of Electronics Technology Students (Two Rivers Vocational, Technical, and Adult School). Plan B, M.S., 1966, Stout State University, 23 pages: Adviser, E. R. Rudiger.

Purpose of Study--The purposes of the study were:

1. To improve the curriculum for better transferability.
2. To coordinate the philosophy of technical education in the Two Rivers Vocational, Technical, and Adult School.
3. To identify those students who dropped out of the program.
4. To begin to establish organized statistics on the Electronics Technology students in the Two Rivers Vocational, Technical, and Adult School.
5. To determine if feeder school programs are possible in electronics technology.

Method Used--The data for this study was obtained through the use of a questionnaire. The questionnaire was sent to the thirty students who had completed the one year program in Electronics Technology in the Two Rivers Vocational, Technical, and Adult School during the school years ending in June, 1964, and 1965. All of the thirty questionnaires were returned. A cover letter accompanied the questionnaire and in some cases telephone calls were necessary to insure a 100 per cent return.

Summary and Findings--Nearly all thirty students who had completed their first year of training in Electronics Technology thought it was to their advantage to begin their training in the Two Rivers School. Of the twenty-six students who transferred credits to a technical institute, nineteen were in school completing or had completed the Associate Degree requirements. Although this feeder school program seemed to be successful, some changes in the curriculum were necessary.

Nygren, Chester C., *A Survey of the Factors Influencing Students in the Selection of a Major Area of Industrial Education at Stout State University*. Plan B, M.S., 1966, Stout State University, 34 pages: Adviser, P. W. Ruehl.

Purpose of Study--The purpose of the study was to determine the significance of Stout experience as an influence on the selection of a major area in industrial education.

Method Used--The method used for the study was a survey of 49 sophomore industrial education students selected by means of a stratified sample. The survey was completed with the use of a questionnaire administered at personal interviews with the selected students.

Summary and Findings--Significant factors influencing the selection of a major area of industrial education at Stout were found to include high school experience in industrial arts, hobby experience, Stout experience in industrial education, precollege work experience, and awareness of the growth and status of a particular area.

Olson, C. Lorraine, *The Role of the Counselor in Inducting the Child into Formal School Experiences*. Plan B, M.S., 1966, Stout State University, 57 pages: Adviser, Ralph G. Iverson.

Purpose of Study--The purpose of the study was to discover what activities in pre-school induction are advised by the authorities, and what counselors are now doing to induct the child into formal school experiences.

Method Used--The method used was a survey of the literature.

Summary and Findings--The elementary school guidance counselor's role in induction is the determination of the child's readiness for school experiences by the administration and evaluation of appropriate tests; the planning and carrying out of orientation activities such as pre-school round-ups, individual conferences, visitations, and handbook distribution; and initiation of the cumulative record with data on identity, health, and family; in order to make the child's early school experiences happy and beneficial. Seven specific recommendations are offered.

Rassbach, Richard R., *Suggested Guidelines for Selecting Four-Year-Olds for Project Head Start*. Plan B, M.S., 1966, Stout State University, 77 pages: Adviser, Evelyn Rimel.

Purpose of Study--The purpose of the study was to review the literature on Project Head Start and portray what the "normal" four-year-old child is capable of doing and how he acts. From this information, the study tried to determine how certain children can benefit from a Project Head Start. It also attempted to set up the guidelines for selecting four-year-olds for such a program.

Rassbach (continued)

Method Used--Review of literature and a questionnaire.

Summary and Findings--

1. The Head Start Programs help the culturally deprived child.
2. The Head Start Program should also include 10% from the prosperous class.
3. The Office of Economic Opportunity helps finance the project.
4. The Office of Economic Opportunity helps train teachers.
5. The Office of Economic Opportunity helps provide health services including social welfare services, psychological services, and nutritional services.

Shaver, Melvin Glenn Jr., Characteristics of the Eau Claire Male Vocational School Students as Shown by the Kuder Preference (Vocational) and Class Rank. Plan B, M.S., 1966, Stout State University, 61 pages: Adviser, R. Iverson.

Purpose of Study--The purpose of this study was to show that there was no direct relationship between interests (Vocational) and Class Rank in the student's selection of a vocational school.

Method Used--The problem included the following major steps:

A. Review of the related literature.
B. Instruments:
    1. Kuder Preference Record (Vocational)
    2. Class Rank (High School)
C. Population for the study was as follows:
    1. Students at the Eau Claire Vocational School (Male) 1965-66 school year.
D. Descriptive anaylsis and recapitulation.

Summary and Findings--The Vocational Student is a person who falls in the first three quartiles of his high school class rank 92 per cent of the time.

The Kuder (Vocational) displays the students as interested in Art, Clerical, and Computation.

The study indicates that there is a direct correlation to high school class rank and interests as compared to the national average of males tested.

Sivernail, Gerald W., A Follow-up Study of Graduates Classes 1958, 1959, and 1960 from Augusta, Wisconsin High School. Plan B, M.S., 1966, Stout State University, 57 pages: Adviser, Guy Salyer.

Purpose of Study--The purposes of the study were (1) to determine the holding power of the community; (2) to discover job information concerning graduates; (3) to determine which subjects have been most beneficial to graduates; (4) to locate institutions of higher learning attended by graduates; (5) to determine the leisure activities of former students; (6) to discover the marriage patterns of these young adults; and (7) to determine further services desired by graduates from the school.

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Method Used--The normative survey method was employed to gather data for this study. An introductory letter, a questionnaire, and a stamped return-addressed envelope were sent to each graduate. A second letter, a questionnaire, and a stamped return-addressed envelope were sent a month later. A postcard reminder was sent after two weeks to those who were still delinquent.

Summary and Findings--Over 70 per cent of the graduates remained in the state. Forty per cent of the graduates were working full time; 25 per cent were housewives; and 20 per cent were still in school. Most graduates got their first job and their present job by direct application. English and typing were considered to be the most valuable subjects to graduates. Over 75 per cent of the graduates obtained some form of training beyond high school. Seventy per cent reported reading magazines and watching television and movies as leading leisure activities. About 70 per cent of the 109 graduates were married.

Solberg, Robert O., An Analogy Between 1962 and 1965 Classes of Drawing in Waukesha High School, Waukesha, Wisconsin. Plan B, M.S., 1966, Stout State University, 29 pages: Adviser, K. J. Erickson.

Purpose of Study--The purpose of the study was to evaluate the method of student selection and to determine if the type of student selected for the accelerated drawing program was the mathematics-science oriented student, who in many cases could not take the full year's drawing course because of his repleted schedule.

Method Used--The problem involved the following major steps:

- A. Survey of literature in the areas of acceleration, mentally gifted students, and honors sections.
- B. Follow up of the 1962 and 1965 classes to determine:
    1. A comparison of students' records.
    2. Whether the math-science student was in attendance.
    3. The extent of participation in other industrial arts classes.

Summary and Findings--From the review of literature, it was determined that classes for the above average student should be creative, flexible, challenging, and that the student should be taught to think.

A follow-up of the 1962 class showed that it truly was composed of the math-science oriented student, with only five of twenty students taking another industrial arts course in high school.

The 1962 class was far superior to the 1965 class in I. Q.

Southworth, Thomas A., A Study of 1964-65 Scholastically Eligible and Ineligible Stout State University Freshman Male Students in Relation to Geographic Location, High School Class Rank and Marks Received in English and Mathematics. Plan B, M.S., 1966, Stout State University, 39 pages: Adviser, R. Iverson.

Purpose of Study--This study was (1) to determine what geographic location students were from that were scholastically eligible and ineligible to return to Stout; (2) to determine how the students ranked in their high school graduating classes; and (3) to ascertain what they received in English and mathematics at Stout State University. English and mathematics were selected because of the large number of students who experienced difficulty in these classes.

Method Used--The information for this study was made available by the Registrar's office at Stout State University during the 1965-66 school year.

Summary and Findings--Wisconsin, Minnesota and Illinois contributed proportionally over 90 percent of the students that returned to Stout for the 1965-66 school term, over 90 percent of the students that were eligible to return but didn't return and over 90 percent of those students that were scholastically ineligible to return to Stout.

The 1964-65 freshman male students who returned to Stout ranked higher in their high school graduating class than did those male students who were eligible to return to Stout but didn't return, and those students who were scholastically ineligible to return.

Sudbeck, Robert F., Class Rank- College Success Relationship Applied to Non-Resident Students Attending Stout State University. Plan B, M.S., 1966, Stout State University, 25 pages: Adviser, Ralph G. Iverson.

Purpose of Study--The purpose of this study was to explore the validity of present admission policies for the selection of non-resident students at Stout State University, and to recommend changes in the admission policy if the findings of this study warranted such action.

Method Used--The method of investigation used in this study was the gathering of data from the office of the Registrar of Stout State University. The data were then charted and evaluated. The population was described for each year, 1961 - 1965, in terms of their class rank and cumulative grade point average. A correlation was then calculated for these two factors.

Summary and Findings--The findings of this study were supportive of class rank being used as an admission criterion. The findings of this study showed that the quality of non-residents students coming to Stout State University relatively constant. This is indicated by the fact that more non-residents are in lower quartiles now than they have been in previous years.

Ten Haken, Larry J., The Correlation Between The Students' Secondary Curricula and Scholastic Achievement At Stout Scate University. Plan B, M.S., 1966, Stout State University, 35 pages: Adviser, Neal W. Prichard.

Ten Haken (continued)

Purpose of Study--The purpose of the study was to determine which curricula, if any, in the secondary school had the most significant influence upon the scholastic achievement of selected senior students at Stout State University who were majoring in industrial education. The study also attempted to determine to what extent industrial work experience influenced the scholastic achievement of this group.

Method Used--The study was conducted by means of a research survey of the secondary school and college records of selected senior class, industrial education students at Stout State University, second semester, 1966. A random sampling of these seniors was used to give a cross-sectional view of the whole group.

Summary and Findings--(1) Students following the college preparatory program in high school tended to attain a higher degree of scholastic success at Stout than those not following this program. (2) Students with three or more credits of industrial arts in high school tended to attain a higher degree of scholastic success at Stout than those with a lesser concentration. (3) Students with industrial work experience tended to attain a higher degree of scholastic success in industrial arts at Stout than those without industrial work experience. (4) Students remaining in the same industrial arts area tended to achieve a lower degree of scholastic success in industrial arts at Stout State University.

Shearman, Glen M., A Survey of the Vocational Interests and Post Graduate Plans for the Burnett County Seniors 1964-65. Plan B, M.S., 1966, Stout State University, 25 pages: Adviser, E. Robert Rudiger.

Purpose of Study--This survey was made to provide data which could serve as a guideline in the continuous updating of the educational programs in Burnett County. The major purposes were to provide data on:

1. the educational plans of Burnett County graduates.
2. the vocational interests of the graduates.
3. the preparational courses selected as foundations for individual vocational plans.
4. the attitudes which exist relating to vocational technical training programs.
5. the preferential location of individuals for vocational opportunities.

Method Used--A survey questionnaire involving all the seniors in the three Burnett County High Schools.

Summary and Findings--

1. There is little opportunity for part-time work leading to full-time employment.
2. With guidance, more graduates could possibly make an earlier decision on what they would like to do.

Shearman (continued)

3. A considerable number of graduates planned to enter the labor force without further training.
4. Very little prejudice exists relative to vocational-technical schools.
5. Most popular vocational selections were: mechanical lines for boys and medical and art lines for girls.
6. Most students planned to leave the county to locate work.

Voskuil, Wallace C., A Survey of Parent Attitudes and Opinions Regarding Parent-Teacher Conferences in Baldwin-Woodville, Wisconsin School District. Plan B, M.S., 1966, Stout State University, 27 pages: Adviser, Ralph Iverson.

Purpose of Study--What do parents consider to be the characteristics of a successful parent-teacher conference? The basic aim of the study was to find the answer to this question. Although considerable literature is available on parent-teacher conferences, most of it is based on observation and opinion. The writer felt that parents themselves are the best authority on what is important to them.

Method Used--This was an opinion survey study which was based on information received from 150 pairs of parents who had recently participated in parent-teacher conferences. A questionnaire was developed and tested in interviews with parents. The final instrument was then sent to 203 pairs of randomly-selected parents. A sidelight to the study is that teacher opinion was also secured by using counterparts to the questions asked of parents.

Summary and Findings--Parents put their greatest emphasis upon receiving complete, detailed information about their children. Next concern was that teachers show a sincere interest in the pupils. Third most important item was that the teacher be friendly and understanding when dealing with parents. Fathers differed from mothers in that they were more concerned that the teacher take an interest in the pupils, while mothers were more insistent on receiving complete, specific information. Teachers and parents were in basic agreement on items making for successful conferences.

Zempel, Harold G., Guidance Services for Chippewa Falls Junior High School. Plan B, M.S., 1966, Stout State University, 42 pages: Adviser, D. Bolstad.

Purpose of Study--The purpose of this study was to investigate the existing guidance program in the Chippewa Falls Junior High School, and to suggest ways in which improvements could be made.

Method Used--The following methods were used in the development of this paper:

1. A review and analysis of the literature.
2. A study of the present program to determine how it is meeting

Zempel (continued)

the needs.
3. The results will be analyzed and suggested improvements will be made.

Summary and Findings--The following conclusions have resulted from a study of recommended guidance services, and those presently offered at Chippewa Falls Junior High School:

1. There are no formal objectives for the guidance services.
2. The individual inventory service is inadequate, primarily in the transition from the parochial schools to the public school system.
3. The information service is inadequate mainly in the dissemination of occupational information. Also, the seventh grade orientation could be improved.
4. The counseling service could be improved by adding a woman counselor, at least on a part-time basis.
5. Follow-up is very inadequate.
6. There is limited in-service training for the staff in guidance, this should be organized and expanded.
7. There is no plan for evaluation of the guidance program.

V

Instruction

"Instruction is the formal function of the school, and it attempts to reflect the aims and needs of those who participate in the program. Research enters this reflection in the improvement of instruction."*

Those abstracts of studies included within this section of the report involve subject matter centered around:

1. Audio-Visual Materials and Services.
2. Closed Circuit Television.
3. Coordination of Programs.
4. Criteria for Purchasing Equipment.
5. Driver and Safety Education Films.
6. Equipment and Facility Needs.
7. History of the General Shop.
8. Instructional Guide.
9. Instructional Techniques.
10. Numerical Control Degree Programs.
11. Program Course Offerings.
12. Project Selection Methods.
13. Single Concept Films.

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*Cf. Courtney, loc. cit., p. 261.

Beveridge, David A., *A Closed Circuit Television Electronics Primer for Educators.* Plan B, M.S., 1966, Stout State University, 110 pages: Adviser, D. P. Barnard.

Purpose of Study--Television seems hopelessly complex to one who is not familiar with the electronic aspects of it. Since no single guide is available which explains to educators the basic electronic concepts and units of a closed circuit television system, it was the purpose of this study to develop such a guide.

Method Used--The description of each unit in the paper was developed through a review of recent literature. The internal operation, the interconnections between the units and the controls on each unit are described in layman's language. The description was simplified from the description which originally appeared in technical form in the publications cited. The study's job was a dual one: (1) to organize the material according to where it was applicable to the closed circuit television system and, (2) to simplify the material so the layman could understand it.

Summary and Findings--Only an overview of the electronic aspects of television was presented since educators must be able to communicate with the technical personnel of a television staff if maximum results are to be obtained. The guide was written for educators not technicians and was intended to provide only an elementary orientation to closed circuit television.

Blonde, Martin J., *Milling Cutter Grinding Techniques--An Instructional Unit in Mashine Shop Photographically Illustrated.* Plan B, M.S., 1966, Stout State University, 70 pages: Adviser, Theodore E. Wiehe.

Purpose of Study--The purpose of this study was to make a pictorially illustrated instructional unit of the setups for sharpening milling cutters by using photographs to illustrate the minute details in the individual steps of a setup.

Method Used--The methods used were to review the basic steps of procedure for the grinding of the peripheral and the sides of a milling cutter. Photographs were taken of the individual steps of a setup in the sequence in which they would normally be performed. The photographs were explained in a manner such that the students could grind a milling cutter with a minimum of instruction.

Summary and Findings--The staggered tooth cutter was selected for describing the techniques in grinding the peripheral and the sides of a cutter. A shell end mill was used for the grinding of the corners of a cutter. The findings showed that instruction can be improved and made easier if photographic illustrations are used in instructional units such as milling cutter grinding. Photographs show the details of a setup which often are difficult to explain.

Brown, Carlton G., Criteria To Be Used In Evaluating Stationary Machines. Plan B, M.S., 1966, Stout State University, 42 pages: Adviser, Neal W. Prichard.

Purpose of Study--The purpose of this study was to discover the factors to be considered when purchasing machinery. After discovering this information, it was used to establish a set of criteria to be considered in comparative machine selection.

Method Used--The principle method of research used was a review of literature. Included in the review were catalogs, industrial arts textbooks, machine design textbooks, government publications, previous studies in related areas, and trade periodicals.

Summary and Findings--The following criteria were chosen as important in machine selection: size and capacity, mechanical features, safety devices, accessories, electrical features, dealer service, and machine cost. They were used to construct evaluative tables to aid the instructor in choosing machinery.

Cardinal, John F., An Audio-Visual Service Plan for the Ladysmith Public Schools. Plan B, M.S., 1966, Stout State University; Adviser, David P. Barnard.

Purpose of Study--The purpose of the study was to present an up-to-date program for the improvement and expansion of the present audio-visual services. This plan, through enrichment of the educational program, should result in aiding all students to attain their maximum educational potential.

Method Used--Two methods were used in developing this study. Literature was reviewed that pertained to all aspects of an audio-visual service program. An analysis of the present school's audio-visual program was accomplished by taking an inventory of:

1. Teaching staffs audio-visual training.
2. Material and equipment in the system.
3. Present services.

Summary and Findings--Adequate audio-visual services for the Ladysmith School's can be a ccomplished through leadership, an increased budget for the purchase of needed equipment and materials, the training of the instructional staff in the use of the available materials and equipment for better utilization, improved center facilities, and a good public relations program.

Christensen, Leno V., A Composite Facility for Comprehensive General Shop or Vocational Agriculture. Plan B, M.S., 1966, Stout State University: Adviser, Neal W. Prichard.

Purpose of Study--The purpose of this study was to determine if a composite facility plan could be developed that would adequately serve Industrial Arts Comprehensive General Shop or Vocational Agriculture.

Christensen (continued)

Method Used--A standard Oregon vocational agriculture building plan was adapted for comprehensive general shop. The plan was developed and a check list of sixty-eight features of the facility was prepared. The opinions of three curriculum experts and seven experienced teachers of industrial arts education were sampled by interview.

Summary and Findings--Over all percentage agreement was 94% for the sixty-eight features.

It was found that a standard Oregon vocational agriculture facility was adequate for industrial arts general shop.

Culliney, Joseph F., Simplified Finishing Techinques for Industrial Arts Laboratories. Plan B, M.S., 1966, Stout State University, 30 pages: Adviser, George Soderberg.

Purpose of Study--The purpose of this study was to develop simple methods of finishing wood, metal and plastic in the school shop. This study was aimed at the small school shop where finishing is often neglected because of time limitation, shortage of space, lack of knowledge on the part of the instructor, and lack of funds. The materials and methods suggested in this study are guidelines for teachers to follow when finishing in small school shops. The materials and methods suggested are all simple to use and give a wide variety of finishes to the three materials mentioned above.

Method Used--A criteria was developed that limited the finishing methods to those most applicable for use in a school shop. Research was then done to find materials and application methods that met with these criteria. The methods that most closely met these criteria were outlined in the study.

Summary and Findings--It was found that there are a great many modern finishes that can be applied in the school shop with very little time and effort involved, if the instructor would take time and effort to become acquainted with them.

Dregne, Darrel A., A Proposed Program Statement for a Laboratory to Serve Classes in Metallurgy, Materials Testing, and Packaging. Plan B, M.S., 1966, Stout State University, 42 pages: Adviser, T. E. Wiehe.

Purpose of Study--The purpose of this study was to provide: (1) a reference for others who would like a sample program statement, (2) a listing of equipment necessary for effective instruction in the areas of metallurgy, materials testing, and packaging, and (3) a suggested floor plan.

Method Used--The format followed in this study was the one being used presently by the Wisconsin State University System.

The laboratory room used was selected as an average laboratory room which may be found in most university buildings.

The required equipment was then selected and a floor plan developed for the future laboratory.

Dregne (continued)

Summary and Findings--Using the selected format as a guide, a program statement was developed for a laboratory which could serve classes in metallurgy, materials testing, and packaging. A proposed floor plan was designed and all machines and equipment were located in the specified areas.

Grum, Richard A., A Survey to Determine the Desirability of the Use of Television as a Method of Instruction in the Laboratory Phase of Driver Education. Plan B, M.S., 1966, Stout State University, 38 pages: Adviser, David P. Barnard.

Purpose of Study--The purpose of the study was to determine the desirability of using television as a method of instruction in the laboratory phase in Driver Education. The study will assist in furnishing a basis for further research. One method might consist of mobile television and its use and application in various outdoor learning activities.

Method Used--An opinion check list was presented to a sample of driver education instructors in Wisconsin secondary schools. The opinions returned were compiled and presented in table form.

Summary and Findings--The results indicated that a majority of the fifty-four respondents felt that television would be a desirable teaching method. Ninety-six per cent of the respondents felt that television could be utilized to bring previously unattainable experiences to the student in driver education.

Hoppe, William J., A Study of the Comparable Welding Techniques of Die Cast Aluminum. Plan B, M.S., 1966, Stout State University, 49 pages: Adviser, Harold H. Halfin.

Purpose of Study--It was the purpose of this study to recommend to teachers the methods of welding die cast aluminum which could be done in a high school shop. Until now, flash butt welding has proven to be best, but it has to high a tooling cost for use in a school shop. The findings will be used for assisting teachers in setting up a unit on welding aluminum die castings. The information also will be used as reference for teachers with problems of repairing die castings made of aluminum.

Method Used--The data for this study was obtained chiefly from three sources:

1. Textbooks written on the subject of welding aluminum.
2. Manufacturers of welding equipment and materials.
3. Producers of aluminum.

The investigator also interviewed men who were accomplished in the field of welding aluminum.

Hoppe (continued)

Summary and Findings--Aluminum die castings are on the increase including such products as the following: cylinder heads, lawn mower housings, pistons, pulleys, and gears.

Metals instructors often acquire the job of repair welding of these aluminum die castings.

Three good methods of welding aluminum die castings are gas shielded tungsten arc, gas shielded metal arc, and oxyacetylene. In a high school shop, TIG produces the best weld, MIG will weld die cast aluminum but is the least recommended of the three, OXY is popular because it is easy and the equipment is simple.

Hsu, Ken-Wang, Single Concept Film and Its Implications for Use in Teaching Electricity-Electronics. Plan B, M.S., 1966, Stout State University, 73 pages: Adviser, G. S. Wall.

Purpose of Study--The study endeavored to make available to the industrial arts instructor some of the necessary information on materials and equipment used in making the single concept film and proposed a plan to use the single concept film. In addition, a review of literature pertaining to basic electricity and basic electronics was needed to provide the implications for use of the single concept film as an instructional method--a more efficient one.

Method Used--In conducting the study, it was decided to incorporate a documentary review of the procedure in the production and educational use of single concept films. In addition, a review of literature pertaining to basic electricity and basic electronics was needed to provide the implications for use of the single concept film as an instructional method--a more efficient one.

Summary and Findings--Single concept films serve in motivation, presentation of the lesson, demonstration and experimentation, student's application, reinforcement and review, and evaluation. Successful use of single concept films depends on the ingenuity of the teacher who uses them.

A list of 16 single concept films was suggested for electricity, there were 10 suggested for electronics.

John, William G., Utilization of Multi-Media for Improving Basic Attitudes in Driver and Traffic Safety Education. Plan B, M.S., 1966, Stout State University, 42 pages: Adviser, D. P. Barnard.

Purpose of Study--The purpose of this study was to improve the quality of education in a basic driver and traffic safety education course through better communication using the multi-media approach.

Method Used--The first step in research was to review the literature of present teaching methods being used in driver and traffic safety education. After this was completed, a review of the literature on

John (continued)

multi-media was made. A proposal was then suggested to improve the teaching of attitudes in driver and traffic safety education.

Summary and Findings--It was concluded from this study that the multi-media technique combined with the conventional methods of teaching driver and traffic safety education should enrich the student's understanding of proper attitudes.

Johnson, Merlin E., *History of the General Shop*. Plan B, M.S., 1966, Stout State University, 28 pages: Adviser, Jack B. Sampson.

Purpose of Study--The purpose of this investigation was to develop a written history of the general shop. It was the author's intent that this investigation be a usable document for any individual interested in, or associated with, the general shop.

Method Used--This historical investigation was based on a review of significant writings, from both past and present years, concerning the development of the general shop and the leaders associated with the development.

Summary and Findings--The dates of origin of the generalshop idea, method of instruction, and terms are established in the investigation. The growth and development of the general shop in industrial arts is presented in detail. New concepts in industrial arts and their relationship to the general shop are also presented.

Kellogg, Kenneth R., *Modern Mathematics and the Junior High School Industrial Arts Teacher*. Plan B, M.S., 1966, Stout State University, 85 pages: Adviser, Neal W. Prichard.

Purpose of Study--The purpose of this study was to ascertain if junior high school teachers of industrial arts possess an understanding of modern mathematics. The findings are to be used for basic information upon which to base the integration of the modern methods of mathematics into junior high school industrial arts areas.

Method Used--The data for this study were gathered by means of a questionnaire. The questionnaires were sent to all junior high school industrial arts teachers who were teaching in schools that were in operation during the 1964-1965 school year as listed in the *Wisconsin Official School Directory*. A total of 208 teachers were contacted and, 179 or 86 per cent completed and returned their questionnaires.

Summary and Findings--It was found that: (1) 100 per cent of the schools use the modern methods of mathematics instruction in their mathematics classes, (2) 60 per cent of the industrial arts teachers have no training in the modern methods and only 13 per cent could be labled good or fair in their use of modern mathematics, and (3) a majority of the teachers, 59 per cent, would like to receive future training in the modern methods for mathematics instruction through in-service meetings.

Klein, Jacob J. Jr., An Evaluation of the Traditional Method of Teaching Safety as Compared to the Contemporary Total Safety Concept Approach. Plan B, M.S., 1966, Stout State University, 41 pages: Adviser, August J. Schulz.

Purpose of Study--The purpose of the study was to determine that a more comprehensive approach be used in teaching safety to Industrial Arts students that would inculcate the students with a total safety concept that would be an intergral part of their active and adventurous lives.

Method Used--The method of investigation was a review of literature of the traditional methods of teaching safety to Industrial Arts students and the total safety concept approach. The study employed the descriptive method of research.

Summary and Findings--From the data obtained and reviewed, it was apparent that although the traditional method was effective in the shop situation, there is evidence to suggest that it may not have the necessary capability to prepare the students for the life situations encountered outside the school shop.

Larson, Rollin D., A Survey of the Project Selection Methods Used by Junior High School Industrial Arts Teachers in Wisconsin. Plan B, M.S., 1966, Stout State University, 56 pages: Adviser, Lee H. Smalley.

Purpose of Study--The purpose of this study was to determine what project selection methods were used by junior high school teachers in the state of Wisconsin. This study also sought to determine if the method of project selection of industrial arts teachers was influenced by their educational preparation, industrial experience, teaching experience, or the type of shop in which they were teaching. The study explored the possibility of a trend in project selection.

Method Used--The survey method was used to obtain the data for this study.

Summary and Findings--This study found that the teacher-selected project method was used in a majority of cases in the seventh grade. The combination project method was the most common method in the eighth and ninth grades. A distinct relationship was not apparent between educational preparation, teaching experience, industrial experience, type of shop and any method of project selection. A trend was not noted in the method of project selection. The psychological literature indicated the student-selected project method would be most desirable from the psychological point of view.

Lasola, Benjamin Jr., An Audio-Visual Communications Center Plan for the Cebu School of Arts and Trades. Plan B, M.S., 1966, Stout State University, 113 pages: Adviser, David P. Barnard.

Purpose of Study--The problem involved three major purposes: (1) to upgrade the teaching process, (2) to implement instructional phases of the teacher education program, and (3) to expand the use of present audio-visual equipment.

Method Used--The methods of procedure that were found necessary in conducting this study were the following: (1) Extensive review of related literature about the works of well-known authorities in planning for new educational media; (2) analysis of information gathered from the different manufacturers of communication media and other government agencies; and (3) evaluation of data gathered from observations, consultations, informal conferences and interviews.

Summary and Findings--An adequate audio-visual program requires a qualified person to coordinate the services of the center. There should be provision for financial support, equipment, materials, and housing facilities. Administration and supervision are the most important considerations in establishing an A-V center. Housing facilities for coordinating the various services of the educational media appear to be a major factor in the operation of an efficient A-V Center. Adequate financing is necessary to obtain an effective A-V program.

Le, Nang, A Proposed Audio-Visual Center for National Chengchi University. Plan B, M.S., 1966, Stout State University, 85 pages: Adviser, Robert R. Hardman.

Purpose of Study--The ultimate aim of this study was to develop for the National Chengchi University in Taiwan an improved program of audio-visual education by determining the criteria of a well-developed program of audio-visual communications media, by eliminating those criteria which were not applicable to the National Chengchi University, and by expanding on those criteria which appeared feasible by incorporating them into the school program.

Method Used--In order to build a comprehensive understanding of the problem, a general study was made of the available literature on the subject of developing an organized and effective audio-visual education program. Basic information regarding the procedure to be followed as well as the materials and equipment necessary to equip the center were carefully taken into consideration by the writer. The study focused on the facilities, personnel, functions, budget-making, administration and supervision of an audio-visual education program.

Summary and Findings--The organization and administration of an audio-visual center depends upon many factors which will provide for an effective and efficient program of instruction. The audio-visual center must be directed by qualified and well-trained director and his staff. Adequate physical facilities, materials and equipment must be provided. Sufficient budget must be allocated for the smooth administration and supervision of the program.

The findings of this study will serve as guidelines in organizing and administering an audio-visual center at the National Chengchi University and other educational institutions in the country.

Lue, Edward P., A Proposed Plan for the Improvement of Technical Vocational Education in the Public Schools of Jamaica. Plan B, M.S., 1966, Stout State University, 65 pages: Adviser, William Mamel.

Purpose of Study--The purpose of this study was to provide guidelines for the development of a new curriculum for technical and vocational schools in the area of trade and industrial education.

Method Used--(1) Analysis of the education structure in Jamaica. (2) Review a follow-up study of recent graduates of vocational schools in Jamaica. (3) Review current literature concerning curriculum development and procedures. (4) Review various aspects of selected vocational programs in selected schools of the United States.

Summary and Findings--Education in Jamaica has not kept pace with social and economic changes. Liberal arts dominates the educational programs of Jamaica. Curriculums are designed specifically to benefit the college preparatory students.

Nelson, Lawrence H., An Instructional Guide for Industrial Arts at Shorewood Junior Senior High School, Shorewood, Wisconsin. Plan B, M.S., 1966, Stout State University, 62 pages: Adviser, Neal Prichard.

Purpose of Study--The purpose of this study was to investigate the national objectives for industrial arts and design an instructional guide for the general comprehensive shop of Shorewood. This guide will be a ready reference for administrational decisions and instructor reference, and will serve as a basis for future recommendations and revisions to meet the changing needs of the students.

Method Used--The methods used in this study were the reviewing of literature in the field of industrial arts education and personal visitations to leading schools and industrial arts programs for ideas and methods. A written report referring to follow-up study of Shorewood High School graduates was obtained from the guidance department. Personal interviews were also used to gain pertinent information about the curriculum, school and the community.

Summary and Findings--The objectives of the American Council of Industrial Arts Supervisors were adopted as the basis for the six year industrial arts sequence. Each level of the sequence was developed from the history and laboratory facilities related to the individual level of the students. Recommendations were also made for further study.

Nomady, Charles T., A Proposed Three-Year Plan for the Implementation of Educational Media in the Colby Public School System. Plan B, M.S., Stout State University, 42 pages: Adviser, David P. Barnard.

Purpose of Study--The purpose of this study was to improve instruction in the Colby Public School System by providing an organized audio-visual service. The organization of this service would be accomplished over a three-year period.

Method Used--The method used in this study was to conduct a comprehensive investigation of current literature in order to determine the elements which constitute a good audio-visual program. Using this information, plus a survey of present equipment and facilities, a three-year plan was formulated for the improvement of instruction.

Summary and Findings--The following points were deemed necessary for a good audio-visual program: 1) Centralized administration, 2) Adequate financial support, 3) Adequate physical facilities, 4) A proper system for the distribution of equipment and materials, 5) Criteria for the selection of equipment and materials, 6) Provision for local production, 7) Provision for in-service training, 8) Provision for public relations.

O'Brien, Thomas E., A Plan for the Use of Polyethylene Glycol-1000 in Turning Salad Bowls from Green Wood in Senior High Woodworking. Plan B, M.S., 1966, Stout State University, 39 pages: Adviser, Neal Prichard.

Purpose of Study--The purpose of the study was to determine the feasibility and practicality of turning salad bowls from green wood and then treating the bowls with polyethylene glycol-1000. In turning bowls, thick stock is necessary. This large stock is sometimes glued-up stock. If polyethylene glycol-1000 can be used on green wood then solid members cauld be turned on the lathe. The fruit derived from the experiment was a definite time schedule that could be followed if one were to have bowls that would not check or loose their shape after a period of time.

Method Used-- The method followed in the study was an analysis of the literature available on polyethylene glycol-1000. The analysis of the literature was followed by an actual experiment on green wood turned into salad bowls. From the outset, it was clear that this experiment was very limited in scope. The results and conclusions arrived at applied only to bowls that fit the specifications set down for the bowls used in the experiment. In the experiment, everything remained constant except for the space of time alloted each bowl in the solution of polyethylene glycol-1000.

Summary and Findings--After a period of four months the following observations were made on the bowls tested. Bowls that were not soaked in polyethylene glycol-1000 showed evident checking. The checking in some cases covered the whole bowl. Bowls that were not soaked were out of round by 1/4 inch. This was true of all bowls that were not soaked.

Some of the bowls were treated with polyurethane resin base varnish finish. These bowls did not differ from those not treated by this finish. This finishing material in no way helped the treating of green wood.

Bowls that were tested after being treated in polyethylene glycol-1000 for different periods of time showed the same characteristics. Of the nine bowls tested two had small check marks.

Offerdahl, Dennis W., An Analysis of the Extent to Which the Latest Drafting Equipment and Media has been Adopted Within Industrial Graphics Departments Among Selected Secondary Schools in the State of Wisconsin. Plan B, M.S., 1966, Stout State University: Adviser, Kenneth Erickson.

Purpose of Study--It was the purpose of this study to determine the extent to which the latest drafting equipment and media of industry has been adopted by the secondary school in Wisconsin.

Method Used--Data for this study was obtained through a questionnaire sent to a random sampling of freshman students who possessed a background of drafting in their high school experience. The data and criteria employed in the questionnaire was selected through interviews of ten industries within the Madison, Wisconsin area. The information secured through this survey comprise the facts upon which the conclusions were based.

Summary and Findings--The findings drawn from the study might be summed up by saying that secondary school drafting departments are unable to keep stride with industry because of a number of problems, the major problem being cost. It is only through the individual initiative of each instructor that students will be informed of those new tools, materials, and methods commonly adopted by industry.

Place, Leonard L., A Semiconductor Timer as a Teaching Aid for Resistance Welding. Plan B, M.S., 1966, Stout State University, 41 pages: Adviser, Philip W. Ruehl.

Purpose of Study--"A Semiconductor Timer as a Teaching Aid for Resistance Welding" was designed and constructed on an experimental circuit board with the research paper. The study incorporated design, operation and bread-boarding of a timer demonstrator, and proposes possible uses of the demonstrator teaching aid.

Method Used--Data were collected by various methods and from various sources. A review of audio-visual literature as it related to models and mock-ups as teaching aids was performed. Letters were mailed to manufactures of these timing controls and their literature was reviewed. Construction of various electronic-timer control circuits on an experimental board was performed to organize and construct an effective teaching aid.

Summary and Findings--

1. In some learning situations, models or mock-ups proved better than or as effective as the original.
2. On a cost basis the model or mock-up (Semiconductor Timer) could justify itself as a teaching aid.
3. By constructing the "Semiconductor Timer Demonstrator" on an experimental board, maximum utilization of the electronic components is realized.
4. Further research on the effectiveness of models and mock-ups, as teaching aids, should be done.

Roehl, David L., Equipment, Tools and Supplies Necessary to Start an Oil Industries Program at Lincoln High School (Wisconsin Rapids, Wisconsin). Plan B, M.S., 1966, Stout State University, 52 pages: Adviser, Philip Ruehl.

Purpose of Study--The purpose of this study was to find what equipment, tools, and supplies are required for establishing an oil industries program to fit the needs of the students at Lincoln High School.

Method Used--The methods used were: (1) Review of literature, (2) Job analysis, (3) List of tools, equipment and supplies, (4) Find costs of tools, equipment, and supplies, (5) Compile the results of the instrument, (6) Analyse the compiled data, and (7) Develop the conclusion and implication based upon the analysis.

Summary and Findings--From this study, it may be concluded that the cost to Lincoln High School for an oil industries program will be approximately $5571.61. This program will cost the Federal Government approximately $5139.97. The total cost of the program will be approximately $10,711.58.

Schmidt, Richard A., An Employment Study of Numerical Control Purchaser's. Plan B, M.S., 1966, Stout State University, 40 pages: Adviser, E. Wayne Courtney.

Purpose of Study--The purpose of this study was to develop a justification for a two year associate degree program in Numerical Control at the Fond du Lac Vocational, Technical and Adult School.

Method Used--The method of research used for this study included a review of available literature, a survey to determine employment trends, and numerous conferences and visits with leaders and research men in industrial, educational and employment positions in the State of Wisconsin.

Summary and Findings--Based upon the results of the study, there appears to be a definite need for people in N/C employment. The results further showed that there will be a definite future need for trained people in this field.

Simonson, Gary E., Suggestions for Teaching Industrial Arts in a Small High School with a Flexible Modular Program. Plan B, M.S., 1966, Stout State University, 42 pages: Adviser, Neal Prichard.

Purpose of Study--The purposes of this study were (1) to develop a guide for teachers and administrators who are involved in flexible modular scheduling programs; (2) to identify various techniques which may be utilized in presenting industrial arts content in a flexible modular program and suggest those methods which seem to be most effective; and (3) to identify problem areas where more research might be done for investigating new methods for teaching industrial arts.

Method Used--The method of study used was a review of the literature describing flexible modular program scheduling to identify its characteristics. Also included was information relating to what has been done in organizing course structure and content for subject areas. A review of the literature was done to see what has been done in the past in teaching industrial arts in a flexible modular program.

Summary and Findings--Methods of teaching industrial arts and activities done in industrial arts can be catagorized to fit within the four types of instruction characterized in flexible modular scheduling: large group, small group, laboratory, and independent study. Minimum course objectives should be set up to allow time for individualization of learning by all students. Variations and/or additions should be organized to stimulate activity in individual interests.

Staege, Glenn A., A Proposed Instructional Materials Center for Oak Creek (Wisconsin) Public Schools. Plan B, M.S., 1966, Stout State University, 57 pages: Adviser, Robert Hardman.

Purpose of Study--The purpose of this study was to present a plan for the development of a modern instructional materials center in which audio-visual equipment and materials could be centrally classified for easy access.

Method Used--The current status of the audio-visual program at Oak Creek showed lack of organization, supervision, and distribution of audio-visual equipment and materials. A review of current literature indicated an instructional materials center would help to eliminate the lack of organization, supervision, and distribution of audio-visual equipment and materials. Based on the review of literature, recommendations were made for an instructional materials center at Oak Creek.

Summary and Findings--An instructional materials center will be provided in the new junior high school which will serve the entire school district. The five functions to be carried out are administration, storage and retrieval of audio-visual equipment and materials, preview and demonstration, production of materials, and in-service training. A full-time audio-visual director and secretary are vital in the operation of an instructional materials center.

Stroup, Thomas P., An Analysis of the Use of Immediate Access to Correctness of Response for Achievement Items in General Shop. Plan B, M.S., 1966, Stout State University: Adviser, Jack Sampson.

Purpose of Study--The reasons for undertaking this study were: (1) to determine if the theory that immediate access to correctness of test responses is applicable in the general shop situation; (2) to form the basis for a possible recommendation that the testing method be implemented in the general shop if the study indicates a relationship between theory and learners achievement.

Method Used--

1. Review of the literature.
2. Identification of the groups to be studied.
3. Development or selection of achievement instrument to be used for data collection.
4. Administration of the instruments to the selected population.
5. Compilation and analysis of the data using a measure of central tendency and variability.
6. Analysis of the findings and development of conclusions.

Summary and Findings--

1. No significant differences were found between experimental and control groups on average attainment in IE 253 and IE 365 general shop.
2. No significant differences were found between experimental and control groups on variability in IE 253 and IE 365 general shop.

Treptow, Donald E., Coordinating a Program for Agriculture and Industrial Arts at Wrightstown, Wisconsin. Plan B, M.S., 1966, Stout State University, 43 pages: Adviser, Neal Prichard.

Purpose of Study--The purpose of this study was to offer students the widest range of courses and experiences possible in a small school with the intent of two classes not meeting in the laboratory during the same period. It was also to aid instructors in guiding students planning their courses carefully so as to utilize their time to the best possible advantage. Currently, a shortage of project and material storage space are present and the areas of instruction are limited.

Wrightstown Administration and Board of Education can use this study as a reference in planning future agriculture and industrial arts programs for junior and senior high school students.

Method Used--The procedures used in collecting the needed data consisted of a survey of literature in the fields of agriculture and industrial arts education. Discussions with administrative personnel and staff members about future growth and expansion were employed.

Visitation and views of other agriculture and industrial arts departments and instructors also proved as an asset. The present programs were analyzed and an expanded proposal was suggested.

Treptow (continued)

Summary and Findings--After a thorough review of literature and analyzing the facilities and equipment; additional instruction areas and a building program were proposed. A set of plans and criteria for building and remodeling were given.

Ward, Robert L., A Proposed Design for the Conversion of a Vertical Opaque Projector for Use as a Motion Picture Animation Stand. Plan B, M.S., 1966, Stout State University, 43 pages: Adviser, Robert Hardman.

Purpose of Study--(1) To study modern animation techniques, especially those relating to an animation stand, (2) to determine what mechanical means are used by the manufacturers of commercial animation stands to accomplish these techniques, and (3) on the basis of the above information to design the equipment for the conversion of a vertical opaque map projector for use as an animation stand.

Method Used--The study of madern techniques of animation was made through a review of literature. Determination of the mechanical means used by the different manufacturers was made through a review of specifications in their latest equipment catalogs. The design of equipment was based on this information, allowing for maximum utilization of the original parts and costs of specially manufactured parts.

Summary and Findings--The most important point made throughout the literature seems to be precision. An animation stand, in order to function properly, must be solidly built throughout. Because of the time consuming nature of animation camera work, maximum ease of operation is very desirable. It is felt that the design presented by this paper is one which may fulfill the following criteria: (1) Design and mechanical mechanisms used in commercial animation stands; (2) Minimum use of costly parts; (3) Maximum use of original parts, and (4) All movement except zoom or trucking in the compound table.

The criteria were used in the design as follows: (1) The digital counter systems, the peg track movements and the platen are patterned after the commercial designs; (2) Only the peg track movement, the zoom counter and the digital counter drive pulleys require special machined parts; (3) The vertical columns, the chain driven carriage, the motor drive and the east-west north-south movement drive screws are all from the original projector; and (4) All movements except the zoom have been incorporated in the compound table.

Watts, Janine A., An Analysis of the Desirability of Semester Course Offerings in Home Economics at Arrowhead High School, Hartland, Wisconsin. Plan B, M.S., 1966, Stout State University, 24 pages: Adviser, Mildred I. Turney.

Purpose of Study--The purpose of this study was to determine the desirability of semester course offerings in specialized areas of home economics at Arrowhead High School in Hartland, Wisconsin. It was hoped that the information obtained from the students would help to improve course offerings in home economics to better meet their needs and interests.

Method Used--The methods of research used in this study were a review of literature and a check list. The check list was used to survey ninth and tenth grade female students at Arrowhead High School.

Summary and Findings--

1. A larger percentage of girls enroll in home economics during their freshman year than during their sophomore year.
2. More respondents preferred two semester-long courses than a year-long course.
3. Most of the girls who preferred the year-long course for the next year were in the freshman class.
4. Several girls not presently enrolled in a home economics course indicated that they would enroll if allowed to select two semester courses of their choice.
5. Over three-fourths of the respondents who preferred semester courses desired them to be in the clothing and textiles area and in the food and nutrition area.
6. Reasons for not electing a home economics course for the following year were varied.
7. Nearly one-half of those not electing a home economics course for the next year stated that they had no time to fit it in their class schedule.

Weyenberg, Jerome J., A Proposed Plan for a Metallurgical and Materials Laboratory to be Located at Stout State University. Plan B, M.S., 1966, Stout State University, 61 pages: Adviser, Theodore Wiehe.

Purpose of Study--The purpose of this study was to determine the instructional units, laboratory floor plan, equipment requirements and cost of a combined metallurgical and materials testing laboratory to be located at Stout State University.

Method Used--Survey.

Summary and Findings--From the survey conducted for this study, a proposed plan was devised. It contains a laboratory floor plan, a list of testing equipment recommended for purchase, and a price list for the testing equipment.

VI

Psychology

> "Much of the research utilized . . . in school problems has not been developed by education workers but from . . . related areas of psychology . . . . In the future, education may find definite answers to its problems by analyzing findings in related areas."*

This section has been separated from the guidance portion of the report because of the psychological nature of the included studies. Those abstracts listed under this section include topics for the following:

1. Achievement.
2. Anxiety.
3. Attitudes.
4. Perception.
5. Self Concepts.
6. Temperamental Traits.
7. Therapy.

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*Cf. Courtney, loc. cit., p. 28.

Egan, Edward M., A Study of Student Attitudes in American Industry. Plan B, M.S., 1966, Stout State University, 69 pages: Adviser, Orville Nelson.

Purpose of Study--The purpose of this study was to determine student attitudes toward American Industry and the classroom experiences that give rise to these attitudes. The data obtained were utilized to recommend changes in the program which would more closely meet the needs of the students.

Method Used--An open form survey method was utilized for obtaining data for this study. The student, in filling out the questionnaire, listed the classes that he liked and disliked and then explained why he liked or disliked them. The student also indicated the positive and negative attributes of his American Industry course.

The responses to American Industry were compared to the responses for the other classes in the student's curriculum. And, a specific evaluation was made of the responses to American Industry.

Summary and Findings--In comparison with other subjects in the students' curriculum, a greater percentage indicated that they liked American Industry. Students liked American Industry because of its utility or usefulness. The lack of activities or laboratory experiences was the major cause for disliking American Industry.

The major attitudinal factor affecting class likes was whether the class was useful or has some measure of utility related to the course.

Attitudes that affected the liking of a course were different than those attitudes that affected the disliking of a course. Specifically, the utility or usefulness of the subject was associated with positive attitudes, whereas teacher organization and lack of activity were associated with negative attitudes.

Recommendations ensuing from this study suggested that new laboratory experiences be initiated and integrated into the instructional sequence of the course.

Grutt, Elaine M., An Identification of Attitudes Toward the State of "Being Elderly" Held by a Sampling of Master's Degree Candidates who have Home Economics Teaching Experience. Plan B, M.S., 1966, Stout State University, 36 pages: Adviser, Mildred I. Turney.

Purpose of Study--There is reason to believe, according to Hatcher and Andrews, that each teacher tends to pass on to students his own beliefs, either consciously or unconsciously. It was the purpose of this study to ascertain some attitudes toward "being elderly" that were held by a small sampling of home economics teachers who were master of science degree candidates during the 1966 summer session. This problem is important to teachers, especially those teaching family relationships, since attitudes can be more readily changed if first identified.

Grutt (continued)

Method Used--This study encompassed the following major steps:

1. Review of literature: formation, modification, and measurement of attitudes; attitudes concerning edlerliness; and the semantic differential procedure.
2. Identification of population: identified through use of questionnaire and the graduate studies office, registration records.
3. Development of instrument: a series of sixteen descriptive scales adapted to the concept "being elderly" by using the semantic differential procedure.
4. Administration of instrument to the selected population.
5. Analysis of data for direction and intensity of attitudes. No conclusions were drawn because a factor analysis was not feasible.

Summary and Findings--The scores of the sampling, when grouped, give the appearance of being somewhat ethnocentric with slight favorability toward "being elderly." Direction: 61.3.% or 19 subjects indicated favorableness, 35.44% or 11 subjects remained neutral, and 3.22% or 1 subject indicated unfavorableness. Intensity: 16.12% or 5 subjects were quite favorable, 45.44% or 11 subjects were slightly favorable and the 1 subject was slightly unfavorable. There were no quite unfavorable, very unfavorable or very favorable attitude scores.

Hallongren, Eugene G., A Comparative Investigation Between Certain Temperament Traits of Graduates of the Industrial Education Curriculum and Graduates of the Technology Curriculum at Stout State University. Plan B, M.S., 1966, Stout State University, 46 pages: Adviser, Evelyn Rimel.

Purpose of Study--The purpose of this study was to determine the difference, if any, and the significance of that difference, if any, between the raw scores of those students who majored in and graduated from curricula in education and curricula in technology on the three traits; active, sympathetic, and cordial, subtests of the Johnson Temperament Analysis.

Method Used--The information on these three subtests obtained from the Johnson Temperament Analysis concerning the two groups of education and technology graduates, was analyzed using raw scores, by the technique of analysis of variance.

Summary and Findings--The study indicated that there was no significant difference between the raw scores of male graduates from the education curricula and graduates of the technology curricula on the three traits. Yet the effect of interest must be scrutinized carefully and additional investigation is necessary to determine its influence on the findings of this study.

Heineke, William F., Matrix Into Meaningfulness; An Exploration of Empathetic Perception. Plan B, M.S., 1966, Stout State University, 351 pages: Adviser, Louis L. Klitzke.

Purpose of Study--The purposes of the study were (1) to explore the precept matrix's potential to create empathetic perception, (2) to explore the validity of the precept matrix as a way of explaining, organizing, perceiving, and understanding another person's degree of authenticity-self-actualization, (3) to examine the reliability of the precept matrix as an instrument and a technique capable of assisting the university counselor to gain an understanding of selected social relationships where students have involved themselves in controversial issues which jeopordize their stature as students.

Method Used--Tape recorded interviews were the source of the data for this study.

Summary and Findings--

1. Precept development would seem to be based on the ability of the individual to take an abstraction from reality and actualize it right back into reality.
2. The more encompassing a person's precepts are, the more sensitive the person is to the world and humanity.
3. The more integrated a person's precepts are, the stronger is his drive to self-actualization.
4. The meaningfulness of a person's life seems to be directly related to the degree to which he can identify himself through his precepts.
5. Precepts are facilitators of identity and identity experiences. Through the individuals precept's he interacts with his environment and through this interaction he comes to know himself and experience himself as he is.
6. There seems to be a positive relationship between the subject's experience as a child and his precept development.
7. The more encompassing a person's precepts are, the more they appear in different situations, behavior manifested, and beliefs, the more valid becomes the matrix as a sensitizer to empathetic perception.
8. The more consistent a person's precepts are in appearing in various situations, behavior manifested, and beliefs, to the degree that they form a pattern which is complementary to the individual's personality the more reliable is the precept matrix in assisting the university counselor in developing empathetic perception.

Hess, Robert W., A Survey of Occupational, Industrial, and Group Therapy Presently Being Employed at the Chippewa, Dunn, Eau Claire, and St. Croix County Hospitals. Plan B, M.S., 1966, Stout State University, 50 pages: Adviser, E. Oetting.

Purpose of Study--The purposes of the study were: (1) To survey and better understand the type of work being done through occupational, Hess (continued)

industrial, and group therapy in the Chippewa, Dunn, Eau Claire, and St. Croix County Hospitals, and (2) to make information and findings available to these hospitals if they desire it.

Method Used--Reviewed the literature on the various therapies and their effectiveness. Selected the institutions to be studied. Used a personal interview technique to collect data regarding occupational, industrial, and group therapies being used in the Chippewa, Dunn, Eau Claire, and St. Croix County Hospitals. Data was compiled into workable categories and analysis was made. Developed conclusions.

Summary and Findings--Percentage of hospital population engaged in at least one of the three therapies ranged from 60% at the St. Croix County Hospitals to 90% at the Dunn County Hospitals. Of this number only 8% to 20% were able to carry out an assigned project without constant supervision. It is with this latter group that remedial rehabilitative efforts are being applied. The therapies have a two-fold objective in the county hospitals. Namely, to help the patient make a better adjustment to the hospital setting, and to aid the patient who may be a release potential. Industrial and group therapy seem most beneficial.

Hovey, H. Allen, A Study to Develop an Instrument to Determine Anxieties in the Advanced Placement Student. Plan B, M.S., 1966, Stout State University, 25 pages: Adviser, Kenneth J. Erickson.

Purpose of Study--The purpose of the study was to develop a test of anxieties in the advanced placement student in industrial graphics.

Method Used--Library research and interviews.

Summary and Findings--Anxieties, while necessary for learning, can inhibit the student's progress. A test was also developed.

Pellegrin, The Rev. Victor, Some Implications of the Concept of Self for Counseling. Plan B, M.S., 1966, Stout State University: Adviser, Louis Klitze.

Purpose of Study--The purpose of this study was to investigate the implications of a philosophy of self in contemporary counseling. The author was concerned that many theories of the formation of and importance of the "core" of the individual's being had been presented to him during the course of his work in Master's Program in Counselor Education, but that there had been little attempt to correlate these meaningfully into a workable and consistant whole. He therefore attempted an introduction to this process which might serve as a resource to others with the same need.

Method Used--The method used was essentially that of establishing the important aspects of a concept of self, as presented by the various schools of psychology, and then that of outlining the salient points in each of these. Two approaches were used, the historical and the topical. At the beginning of each topic area (chapter) questions to be considered in the following pages are listed. In view of the complicated terminology used by the authorities, which might be unfamiliar to the reader, a glossary of terms used in the paper has been placed in the appendix. Because there are so many facets to this concept the author has also included a chapter dealing with the limitations of the paper and of any such philosophy.

Summary and Findings--Because this study did not attempt to establish any "new" information there are no "findings" as such.

Shelley, John C., A Comparative Study of the Affects of Divorce on Scholastic Achievement. Plan B, M.S., 1966, Stout State University, 39 pages: Adviser, Erich R. Oetting.

Purpose of Study--The purpose of this study was to determine if significant differences in scholastic achievement existed between children in a typical sixth grade, coming from homes in which there was no record of divorce and with children who were from homes that have been broken by divorce.

Method Used--The method used in this study was a cumulative record study of I. Q. scores and Metropolitan Achievement Test scores of students who came from homes where there is record of divorce compared with an equal number of similarly equated students from homes where there has not been a divorce incident. This was accomplished by surveying all elementary schools in Eau Claire, Wisconsin. The chi-square formula was used to make the comparison of the two groups.

Summary and Findings--The results of the chi-square test for significance revealed that the scholastic achievement of children coming from divorced homes is not significantly different from the achievement of the children whose homes are not broken by divorce.

Zilisch, Jean M., Creativity, Self-Concept, and Scholastic Achievement: An Experimental Study to Determine Relationships Between Creativity, Self-Concept, and Scholastic Achievement in Selected Stout State College Students. Plan B, M.S., 1965, Stout State University, 82 pages: Adviser, Evelyn Rimel.

Purpose of Study--The analysis of the self-concepts of students scoring both high and low on the tests of creative thinking as well as comparisons of their academic ability as measured by A.C.T. test scores and scholastic achievement as measured by grade point average should prove helpful to guidance counselors and educators interested in helping students utilize their potential abilities.

Zilisch (continued)

Method Used--The Minnesota Tests of Creative Thinking, The Index and Adjustment and Values, and A.C.T. test scores were correlated and compared with grade point averages to see if any relationships existed between these scores acquired from the testing of selected Stout State College students.

Summary and Findings--The findings indicated that students who showed creative ability do not seem to feel as adequate about themselves as those students who did not show evidence of this ability. There was increased evidence of conflict in those students showing creative ability compared with those who did not. Because the correlations showed only slight relationships; it is not possible to draw firm conclusions.

VII

Sociology

"In order for students to better understand the various roles played by society . . . such research is deemed essential and desirable for studies in education."*

Only two studies were classified under this section for the period of time covered in the report. The selected papers represented:

1. Nursing Home Programs.

2. Success Patterns.

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*Cf. Courtney, loc. cit., p. 226.

Elkins, R. William, A Study on How to Attain Success by Examining the Formulas Used by the Experts. Plan B, M.S., 1966, Stout State University, 40 pages: Adviser, Guy Salyer.

Purpose of Study--The problem of attaining success in life poses a problem to a great number of people. A few persons of energy and will to enkindle their ambitions forge ahead steadily to secure their objectives, but far greater numbers never range far from their pristine state.

There are several reasons for this inaction. First, they may fear the new environment of which they must become a part. Second, they may not have the vigor to institute and pursue an effective plan of action. Third, they do not know the formulas that lead to success.

This paper has attempted to show how teachers, counselors, parents, and other may provide some important information gleaned from the experience and wisdom of those who have succeeded in the work of their chosen field.

Method Used--The formulas of success vary according to the different causative factors involved. One person may wish to rise to a higher economic level because he has been embarrassed by proverty, another may consider the accumulation of wealth a game, while a third party may be actuated by a great love of money or a desire for the things money will buy. However, the attainment of success does not always involve the accumulation of wealth, as can be seen in the cases of Gandhi and Walt Whitman. Simply, success is the realization of one's dreams, but seldom if ever does society regard one of low aims a valid candidate to include in the category of successful people.

Summary and Findings--If success means the achievement of the task that one has set for himself, then it is attained repeatedly and by many people. However, success in the confines of this paper denotes an accomplishment of some magnitude and consists of the chief activity that is dominant during a great part of one's life.

After having examined the recipes for success employed by many successful men, a simple formula for success seems to fall broadly into the following outline:

1. An intense ambition to succeed at some vocation or profession.
2. Making the right choice of a vocation or profession.
3. The possession of educational and physical qualities for the execution of the chosen plan of action.
4. The courage to persevere.
5. The willingness to work hard.

Stegeman, Frank A., Setting Up An Activities Program For Nursing Homes In Northwestern Central Wisconsin. Plan B, M.S., 1966, Stout State University, 106 pages: Adviser, Louis Klitzke.

Stegeman (continued)

Purpose of Study--The aim of this study was to develop an improved program of activities by comparing and evaluating the present programs with the suggested criteria to the selected nursing homes in the seven counties of Northwestern Central Wisconsin.

Method Used--A general study was made of the available literature on the subject of developing an organized and effective activities program. A visit and interview with the administrators and activity directors of the different nursing homes, the staff, and the residents and then subjective interpretation of the data gathered was utilized in this study.

Summary and Findings--The findings from this study have supported the basic assumption that the activities programs in many of the nursing homes is inadequate in meeting the psychological, emotional, and social needs of the residents.

VIII

Statistics

"When combined in proper prospective with research principle and methodology, statistical knowledge has much meaning and usefulness."*

Studies included within this portion of the report were deemed to possess methodology or procedure emphasizing statistical analysis. Types of techniques utilized by the selected research abstracts included:

1. Analysis of Variance.
2. Chi-Square.
3. Correlation Techniques.
4. Sample Error Techniques.

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*Cf. Courtney, _loc_. _cit_., p. 187.

Pisani, Paul M., A Statistical Study to Determine Difference on Mean ACT Scores of Students in Four Areas of Concentration at Stout State University. Plan B, M.S., 1966, Stout State University, 51 pages: Adviser, Jack Sampson.

Purpose of Study--It was the purpose of this study to determine if there were any significant differences between students enrolled in General Shop, Industrial Graphics, Metals, and Wood Technics based on the ACT standard scores received (1) on the English usage subtest; (2) on the Mathematics usage subtest; (3) on the Social Studies reading subtest; (4) on the Natural Sciences reading subtest; and (5) on the Composite score for these four subtests.

Method Used--Data was tabulated from the individual files of 167 students who enrolled at Stout State University in 1963 and 1964 in the areas of General Shop, Industrial Graphics, Metals, and Wood Technics. The data was then analyzed by the Analysis of Variance statistical procedure and the Standard Error of the Difference Between Means statistical procedure.

Summary and Findings--Based on the English usage subtest scores, the Social Studies reading subtest scores, the Natural Sciences reading subtest scores, and the Composite scores, no significant difference was found between the students enrolled in the four areas of concentration. Based on the Mathematics usage subtest scores, a significant difference was found between the students enrolled in the four areas of concentration.

Quilling, Alice T., Correlation Between ACT Composite Scores and First Semester GPA's of Freshman Women at Stout State University, 1965. Plan B, M.S., 1966, Stout State University, 18 pages: Adviser, John Duling.

Purpose of Study--The purpose of the study was to determine the degree of relationship between the ACT Composite Score and the first semester GPA of 1965 freshman women at Stout State University.

Method Used--A survey was made of the available literature concerning the ACT, the GPA and ACT scores were recorded, and the correlation determined using the Pearson Product Moment Correlation formula.

Summary and Findings--The GPA and ACT scores were obtained for all women entering Stout in 1965 who had not previously attended college. The Pearson Product Moment correlation formula was used and a positive correlation of .61 was determined.

Shimada, Harry M., A Chi-Square Study to Determine Difference of ACT Scores for Students in Four Areas of Concentration at Stout State University. Plan B, M.S., 1966, Stout State University, 28 pages: Adviser, Jack B. Sampson.

Shimada (continued)

Purpose of Study--The purpose of this study was to gather and analyze the ACT scores of the students enrolled in four areas of concentration in Industrial Education--General Shop, Metals, Industrial Graphics, and Wood Technics--at Stout State University; and to see if there was any significant difference between the ACT scores and student's choice of area of concentration.

Method Used--The chi-square method, a sample error technique, was used in this study.

Summary and Findings--This study showed that: (1) There was no relationship between the ACT standard scores and the area of concentration of Industrial Education students at Stout, (2) The majority of students in the four areas of concentration studied scored below the norm median on the ACT English subtest, (3) The majority of students in the four areas of concentration scored above the norm median on the Mathematics, Social Science and Natural Science subtests of the ACT, and (4) The ACT scores do not provide a criteria suitable for counseling purposes when related to area of concentration in Industrial Education.

IX

Technical

"Research has implication for education beyond the curriculum development program."*

Technical studies are frequent at Stout with many research projects having been completed during the recent year. These projects have included studies dealing with:

1. Damp Paper Printing.
2. Food Lunch Items.
3. Material Hardness.
4. Metal Surface Finishes.
5. Nickel Maraging Steel.
6. Paper Patterns in Clothing Construction.
7. Screen Process Electrostatic Printing.
8. Sewing of Horizontal Fabrics.
9. Structural Adhesive Analysis.
10. Toner Compositions.

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*Cf. Courtney, loc. cit., p.212.

Aken, Paul H., Screen Process Electrostatic Printing. Plan B, M.S., 1966, Stout State University, 53 pages: Adviser, Thomas Gray.

Purpose of Study--It was the purpose of this study to develop a successful way of demonstrating the screen process of electrostatic printing for the school printing laboratory, using a machine that can be economically built by the instructor, to provide the student of printing with a fundamental understanding of the screen process of electrostatic printing.

Method Used--The methods of research used in this study were documentary frequency and laboratory experiments. Available literature was used and plans were made to build a screen process electrostatic printing machine and use it as a demonstration device in the school printing laboratory.

Summary and Findings--Screen process electrostatic printing is a major innovation in the printing industry. It needs to be taught in our schools for this is the printing of the future. It is a very simple process, very much like the four basic processes except it does not require pressure. At the present time the future of this process is mostly in the packaging field.

Amling, Russell K., The Process of Printing on Damp Paper. Plan B, M.S., 1966, Stout State University, 22 pages: Adviser, Lloyd Whydotski.

Purpose of Study--The purpose of this study was to assimilate available information on the lost art of printing dampened paper; to record the information in a manner which will be useful to students of printing, especially those persons interested in the process of printing on dampened paper.

Method Used--The methods of research used in this study were by historical and a taped personal interview. First a review of literature was conducted. Second, a taped personal interview was obtained with Mr. Edwin Grabhorn, a retired printer, from San Francisco, California, on his personal experience with this lost art of printing on dampened paper.

Summary and Findings--This paper was undertaken to make all necessary and available information readily available for those persons interested in this "lost art," of printing on dampened paper. It has explained the process of dampened paper, kinds and types of papers used, type and special kinds of inks used and the process used to print the dampened sheet. It is the opinion of the author and Mr. Edwin Grabhorn of the Grabhorn Press, San Francisco, Claifornia thatthis process of lost art of printing on dampened paper is too expensive, because of the cost involved in making or purchasing the handmade papers from distributors in this country or directly abroad.

Beardslee, David G., A Survey and Analysis of Structural Adhesives as Used in the Metal-Working Industries. Plan B, M.S., 1966, Stout State University, 43 pages: Adviser, Harold H. Halfin.

Purpose of Study--It was the purpose of this study to evaluate those structural adhesives being used by a sampling of the metal-working industries in regards to their meeting the manufacturers specifications under practical school shop conditions. A further prupose of this study was to evaluate the findings in terms of a future teaching unit on structural adhesives.

Method Used--The first method employed in this study was a selected survey of the books, magazines, pamphlets, and bulletins located at Stout State University.

The second method used here, was to survey, by use of a questionnaire, various metal-working industries.

An additional method of study was to test, in the Stout State University metals laboratory, samples of various structural adhesives.

Summary and Findings--The findings of this study showed that there are more than 19 different structural adhesives being used to replace a number of common metal fastening devices. Some of these adhesives are better suited to use under school shop conditions than others.

DeLestry, James R., An Investigation of Material Hardness for the American Industry Study. Plan B, M.S., 1966, Stout State University, 35 pages: Adviser, Wesley L. Face.

Purpose of Study--The purpose of this study was to define and determine the characteristics of material hardness, formulate a few simple generalizations, and to predict hardness from the generalizations. This information may be used by the American Industry Program as a resource unit, or in a single concept film.

Method Used--The normative survey method was used in this study. It is based upon documentary evidence, interviews with physics and chemistry instructors in college and high school, observations, and brainstorming sessions with students in college and high school.

Summary and Findings--Hardness means different things to different people and is a difficult concept to completely understand. Neither the chemist or physist can define it and it is impossible to predict with a few simple rules.

Fuller, Charles J., A New Steel--Its Analysis and Use--18% Maraging Steel. Plan B, M.S., 1966, Stout State University, 43 pages: Adviser, Harold H. Halfin.

Purpose of Study--The purpose of this study was to determine and define the characteristics and properties of 18% nickel maraging steel. The effects of the addition of various elements on the basic binary iron-nickel compound will be determined, as well as the applications

Fuller (continued)

and need for the three grades available.

This study was conducted to help teachers in industrial education improve their knowledge and understanding of the working qualities and characteristics of 18% nickel maraging steel. It will hopefully help the teacher determine the feasibility of initiating a unit on maraging steel.

Method Used--The method of research used in this study was documentary. To obtain information several companies were contacted.

Summary and Findings--Since the development of maraging steel in 1959 by the International Nickel Company, it has grown considerably in importance.

This steel was developed because of a need for an ultra high strength alloy for space vehicles. The more common uses have been overshadowed by these more glamorous applications.

Eighteen percent nickel maraging steel has excellent hot working, cold working, welding, and machining characteristics.

Glennon, Margaret Ann, The Historical Development of the Paper Pattern That is Used in Clothing Construction By the Home Sewer. Plan B, M.S., 1966, Stout State University, 21 pages: Adviser, Jeanne Salyer.

Purpose of Study--Since the paper pattern is of great importance in the construction of a garment, it was the purpose of this study to trace the historical development of the paper pattern to analyze the social and economic factors that have been influential in its development.

Method Used--The method of investigation for this study was historical in nature. Both primary and secondary sources of information were used. Basic information of necessity, came from written sources. This writer also received valuable assistance from pattern manufacturers and by interviewing seamstresses who had worked with the paper pattern during its various stages of development.

Summary and Findings--Over the past one hundred years, the paper pattern has progressed from a jumble of lines on a sheet of paper to the printed sheet of tissue we use today. Its developmental stages have progressed with a very close relationship to America's progress in developing its industrial genius. Before the sewing machine was invented, people outside the home could construct a family's garments. Many elite imported their garments. When World War I curtailed and finally eliminated this practice, mass production was in its infancy. Fortunately for home sewers of today, there were men that realized the potential of mass production of paper patterns and have developed it to it present level.

Huston, Donald B., The Chemistry and Light Refraction of Toners For Black Litho Ink. Plan B, M.S., 1966, Stout State University, 117 pages: Adviser, Lloyd Whydotski.

Huston (continued)

Purpose of Study--The purposes of the study were as follows:

1. To determine the chemical composition of toners used in lithographic ink.
2. Determine if there is any correlation between the amount of toner added to a black lithographic ink and the light refraction values of this mixture.
3. Determine proportions of toner and black lithographic ink for a given effect.
4. Place the proportional ink mixture under actual press conditions.

Method Used--

1. The problem was selected and defined.
2. All available literature was studied to determine what toners were composed of.
3. Ink toners were chosen in accordance with their chemical compatability.
4. Conferences were held with Ink Technologists at the Consolidated Ink Co., and with an ink chemist at the 3M Company to evaluate the methods and procedure.
5. Light refraction values were measured and recorded to determine if any correlation existed between the ink samples and the light refraction values.
6. Various ink samples were run under actual press conditions to determine if the ink samples experimented with produced various effects when used in conjunction with their light refraction values.

Summary and Findings--Benzidine yellow, Malachite green, and possibly Methyl violet, will produce a given refraction value following the proportions given during the experiment. Lithol red definitely will not give a light refraction value following the given proportions.

Leonard, Gary F., A Descriptive Analysis to Determine the Degree of Mechanical Surface Finish on Metals. Plan B, M.S., 1966, Stout State University, 65 pages: Adviser, Marvin Kufahl.

Purpose of Study--The information and data gathered may well serve the industrial educator as a basis for instructional units in the metal working area. Much of the technical data gathered will be of use to the process engineer in the selection of the right finish for a particular job. This report contains background material concerning the nature of abrasives, metal preparation and finish applications, and the instruments used to detect the degree of mechanical surface finish on metals.

It was the purpose of this study to analyze the available data on mechanical surface finishing and arrange it in a meaningful form.

Method Used--This report is of the descriptive research type and includes a review of literature such as books, technical bulletins, periodicals, pamphlets, etc. The sources of the information gathered are the Robert L. Pierce Library at Stout State University, Menomonie, Leonard (continued)

Wisconsin; materials acquired from instructors in the Stout State University Metals Department; and resource materials requested from industries who are presently working with various finishing processes and techniques.

Summary and Findings--It was defined in the study that (1) the background materials gathered were concerned with the nature of abrasives, either natural or artificial; (2) it defined the metal preparations and finishing applications used to obtain a certain degree of surface finish such as a matte, satin, polished or buffed; (3) an understanding of the factors affecting a surface finish, the purpose of the finish and examples of step-by-step procedures on surface finishes; and (4) how a desired degree of surface finish is calculated, the problem in producing that finish, the characteristics of the finish and the equipment used in the measurement of surface roughness.

Pracht, Lynda L., Techniques in Home Sewing that Give Satisfaction When Using Horizontal Stretch Cotton and Cotton Blend Fabrics. Plan B, M.S., 1966, Stout State University, 57 pages: Adviser, Hazel Van Ness.

Purpose of Study--This study was undertaken to find the best methods to be used by home sewers when sewing horizontal stretch cotton and cotton blend fabrics and to observe the effects of wear and washings on these fabrics after twenty wearings and washings.

Method Used--Six samples of horizontal stretch fabric were purchased, and after some pretesting to limit the number of variables, the fabrics were sewn into child's shift dresses. The dresses were worn and washed using a standard method, for twenty washings. They were examined after the first, fifth, tenth, fifteenth, and twentieth washings. Tests were also made on the fabric after wearing.

Summary and Findings--The stretch materials seemed to make very suitable dresses for the child and showed little wear after twenty wearings and washings. The following recommendations were made:

1. Use Taslan thread, No. 14 needles, and light tension and pressure.
2. Use bias binding on the hem.
3. Turned and stitched seam finishes are best if the garment does not need frequent pressing, stitched one-fourth inch from edge if pressing is necessary.
4. Careful selection of trims to be sure they don't show signs of wear before the garments are worn.

Hicks, Sister Carl Marie, F.S.P.A., Acceptance of Food Items in Type A School Lunch Menus by Children at St. Joseph's Elementary School, Menomonie, Wisconsin. Plan B, M.S., 1966, Stout State University, 78 pages: Adviser, Ella Jane Meiller.

Hicks (continued)

Purpose of Study--The purpose of this study was to determine what effect certain factors had on the acceptance of food items offered in a type A school lunch program in an elementary school.

Method Used--The total menu was scored for appearance. Acceptance of the foods by all of the children in all of the grades was recorded. Since children could take or omit whatever they wished, their taking of a food was the indicator of acceptance. Data was analyzed by means of percentage calculations, ranking, rank correlations, and chi-square.

Summary and Findings--Acceptance percentages and appearance scores correlated positively only for cheese and sweet potatoes, both of which were accepted by less than 10% of the children and received very low appearance scores. Since all other foods scored high on appearance but were not all equally as well accepted, appearance was not considered to be a factor in acceptance.

Meat and vegetable-fruit items were more popular with girls than with boys and bread and dessert items were more popular with boys than with girls.

More children returned for seconds of fish sticks, chicken, doughnuts, cookies, and rolls than for any other foods.

The majority of foods were accepted by 70 or more per cent of the children. The average percentage acceptance for each food group was as follows: protein-rich, 76%; vegetable-fruit, 51%; bread, 53%; and desserts, 83%.

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